TYAGUNENKO, V. L., Maj

Scheduled to defend publicly his dissertation, "The Enslavement and Systematic Robbing of Backward Countries: The Means of Insuring Maximum Capitalistic Profits," for the degree of Candidate of Economic Sciences, at the Military-Political Academy imeni Lenin, on 28 September 1954. Krasnaya Zvezda, Moscow, 15 Sep 54

SO: SUM 291, 2 Dec 1954

TYAGUNENKO, V. L.

The reactionary nature of imperialistic "aid" programs for underdeveloped countries. Vop. ekon. no.12:65-74 D '60. (MIRA13:12)
(Economic assistance) (Underdeveloped areas)

RYMALOV, Viktor Vladimirovich; TYAGUNENKO, Viktor Leonidovich; ARZUMANYAN, A.A., otv. red.; MAKAROV, V., red.; DARONYAN, M., mladshiy red.; MOSKVINA, R., tekhn. red.

[Underdeveloped countries in the world capitalist economy] Slaborazvitye strany v mirovom kapitalisticheskom khoziaistve. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 494 p. (MIRA 14:12)

1. Chlen-korrespondent AN SSSR (for Arzumanyan).
(Underdeveloped areas) (Economic conditions)

TYAGUNENKO, YU.

BULGARIA/Microbiology - General Microbiology. F

Abs Jour : Ref Zhur Biol., No 1, 1959, 598

Author : Tyagunenko, Yu.

Inst : Bulgarian Academy of Sciences.

Title : Turbidimetric Method of Determining Density of Bacterial Suspensions in Test Tubes.

Orig Pub : Izv. Otd. biol. i med. n. B"lg. AN Ser. eksper. biol. i med., 1957, No 2, 233-239

Abstract : A method is described fro measurement of the density of bacterial suspensions with the FEK-M electrophotometer, where the cuvette is replaced by a test tube. The method is 10-20 times as precise as the visual. -- Author's abstract.

Card 1/1

KARPAROV, A.; KALYCHEVA, I. [Kalucheva, I.]; TYAGUNENKO, Yu. [Tiagunenko, IU.]

Electron-microscopic study of the ultrathin slices of the tobacco mosaic virus. Trudy epidemiol mikrobiol 8:157-161 '61 [publ.'62].

TYAGUNENKO, Yu. V., d-r

Friends and foes of mankind. Nauka i tekhn maldezh 14 no.3:22-25 Mr '62.

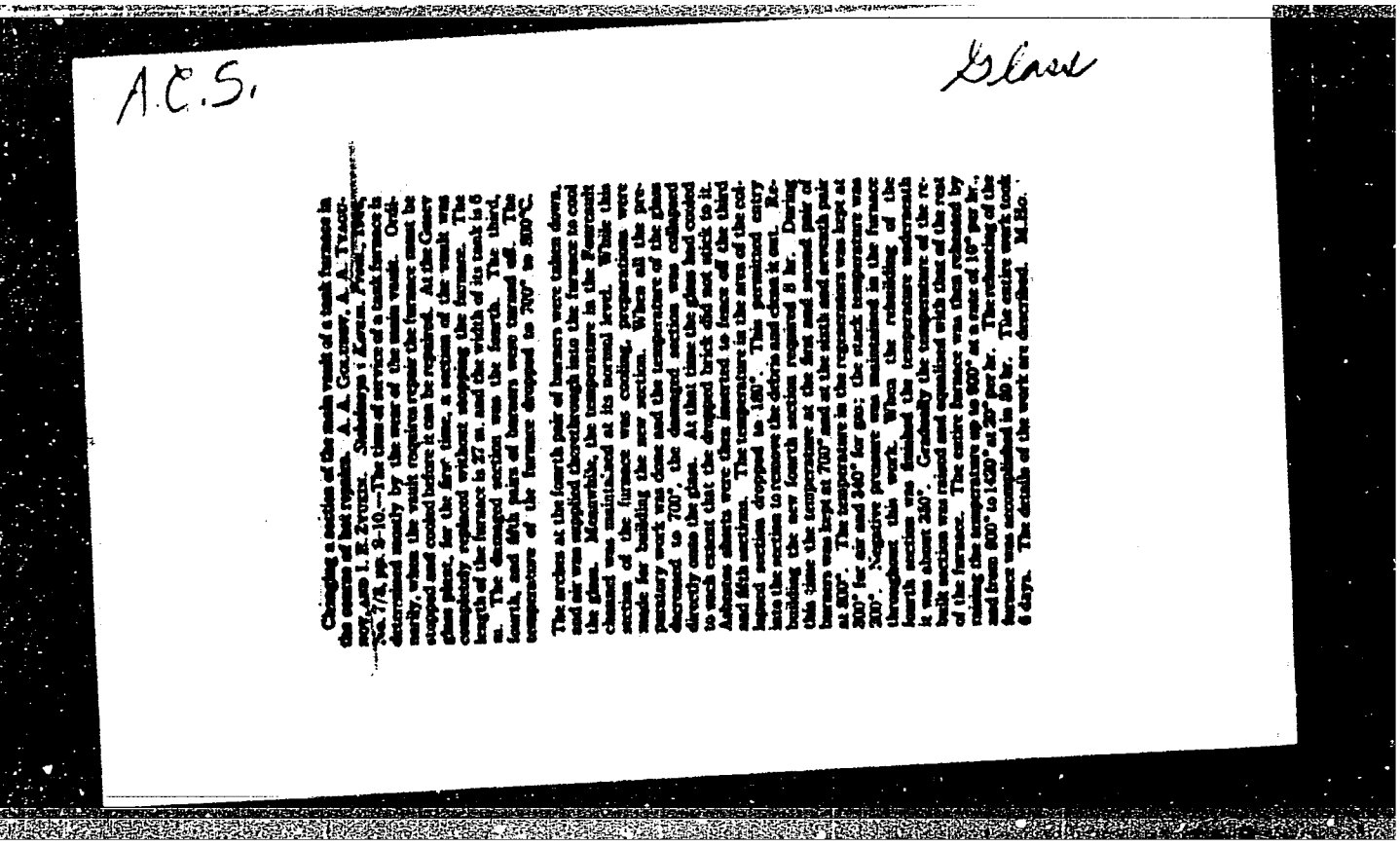
SELIVANOV, A.V., doktor vet. nauk; BUTUSOV, G.M., starshiy nauchnyy sotrudnik; TYAGUNINA, Ye.A., mladshiy nauchnyy sotrudnik

Passive immunity to leptospirosis in young pigs. Veterinariia 42 no.9:31-33 S '65. (MIRA 18:11)

1. Sibirskiy nauchno-issledovatel'skiy veterinarnyy institut.

A.C.S.

Glass



Changing a section of the main vault of a tank furnace in the course of hot repair. A. A. Gusarov, A. A. Trapeznikov, I. E. Zvonov. Steklo i Keram., Proiz. Tekh., No. 7/8, pp. 9-10.—The time of service of a tank furnace is determined mainly by the state of the main vault. Occasionally, when the vault requires repair the furnace must be stopped and cooled before it can be repaired. At the Gusev glass plant, for the first time, a section of the vault was completely replaced without stopping the furnace. The length of the furnace is 27 m. and the width of its vault is 6 m. The damaged section was the fourth. The third, fourth, and fifth pairs of burners were turned off. The temperature of the furnace dropped to 700° to 800°C. The arches at the fourth pair of burners were taken down, and the wall supplied directly into the furnace to cool the glass. Meanwhile, the temperature in the Recuperator channel was maintained at its normal level. While this section of the furnace was cooling, preparations were made for building the new section. When all the preparatory work was done and the temperature of the glass decreased to 700°, the damaged section was collapsed directly onto the glass. At that time the glass had cooled to such extent that the dropped brick did not stick to it. Asbestos sheets were then inserted to fence off the third and fifth sections. The temperature in the area of the collapsed section dropped to 150°. The permanent entry into the section to remove the debris and clean it out. Rebuilding the new fourth section required 5 hr. During this time the temperature at the first and second pair of burners was kept at 700° and at the sixth and seventh pair at 800°. The temperature in the regenerators was kept at 350° for air and 340° for gas; the stack temperature was 310°. Negative pressure was maintained in the furnace throughout the work. When the rebuilding of the fourth section was finished the temperature underneath it was about 250°. Gradually the temperature of the refractories was raised and equalized with that of the rest of the furnace. The entire furnace was then released by raising the temperature up to 800° at a rate of 10° per hr. and from 800° to 1450° at 20° per hr. The rebuilding of the furnace was accomplished in 25 hr. The entire work took 6 days. The details of the work are described. M.Ko.

TYAGUNOV, A. A.

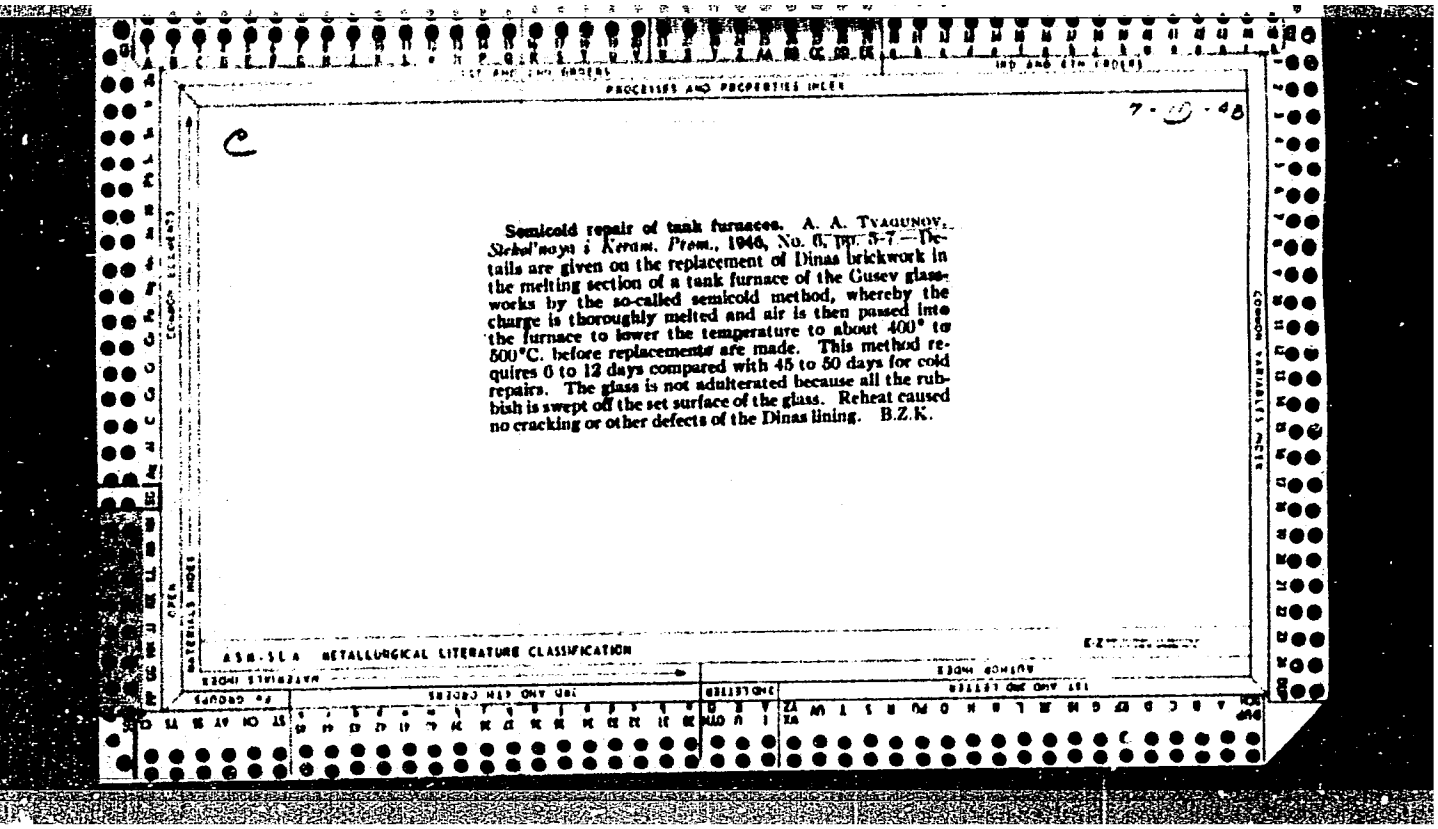
Semicold repair of tank furnaces. A. A. TYAGUNOV. *Stekol'naya i Keram. Prom.*, 1946, No. 6, pp. 5–7.—Details are given on the replacement of Dinas brickwork in the melting section of a tank furnace of the Gusev glassworks by the so-called semicold method, whereby the charge is thoroughly melted and air is then passed into the furnace to lower the temperature to about 400° to 500°C. before replacements are made. This method requires 6 to 12 days compared with 45 to 50 days for cold repairs. The glass is not adulterated because all the rubbish is swept off the set surface of the glass. Reheat caused no cracking or other defects of the Dinas lining. P.Z.K.

METALLURGICAL LITERATURE

TYAGUNOV, A. A.

Semicold repair of tank furnaces. A. A. Tyagunov. *Steklo i Keram. Prom.*, 1946, No. 6, pp. 5–7.—Details are given on the replacement of Dinas brickwork in the melting section of a tank furnace of the Gusev glassworks by the so-called semicold method, whereby the charge is thoroughly melted and air is then passed into the furnace to lower the temperature to about 400° to 500°C. before replacements are made. This method requires 6 to 12 days compared with 45 to 50 days for cold repairs. The glass is not adulterated because all the rubbish is swept off the set surface of the glass. Reheat caused no cracking or other defects of the Dinas lining. U.Z.K.

METALLURGICAL LITERATURE



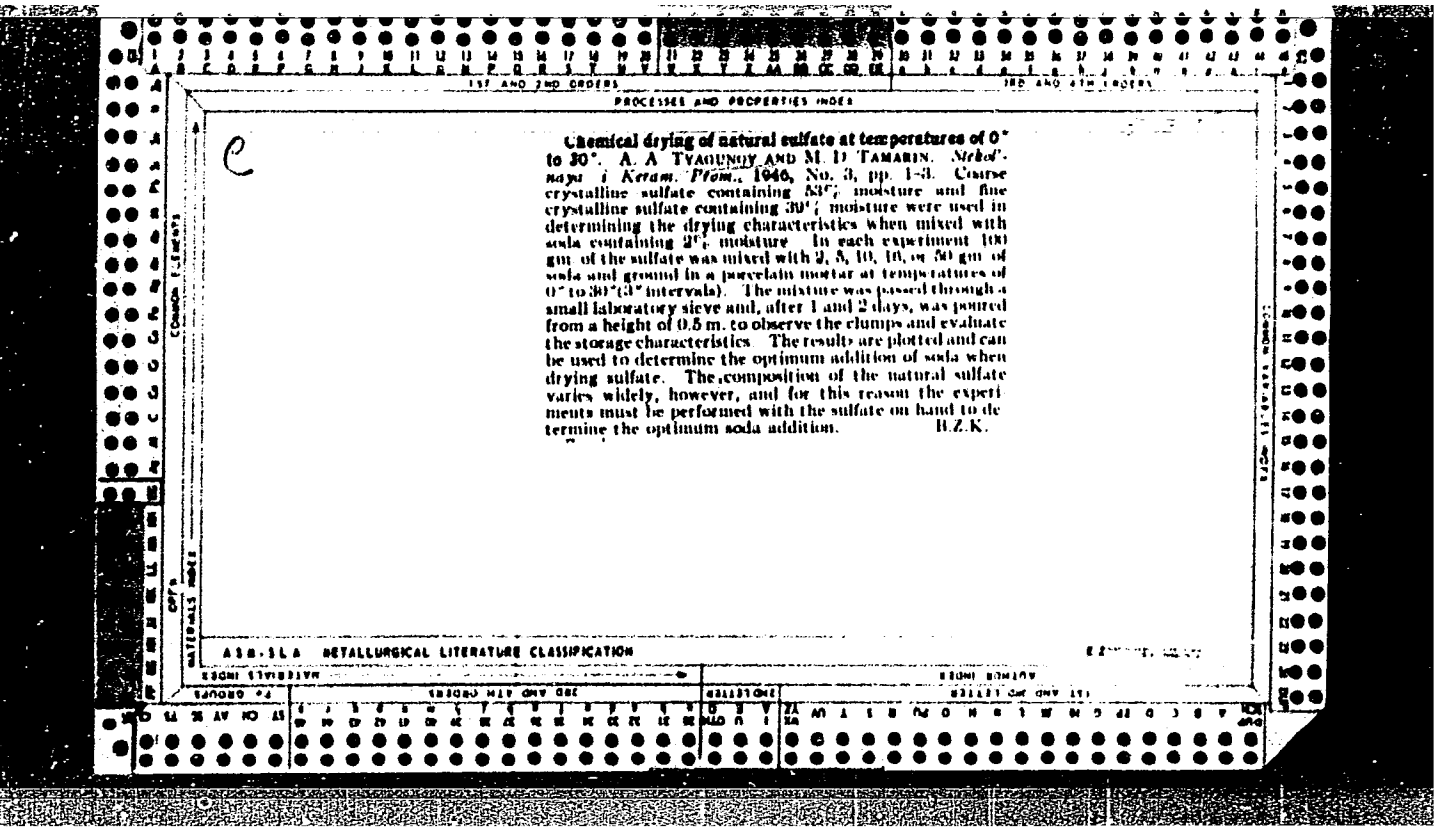
PROCESSES AND PROPERTIES INDEX

7-10-48

C

Semicold repair of tank furnaces. A. A. TYAGUNOV. *Stekol'naya i Keram. Prom.*, 1948, No. 6, pp. 5-7.—Details are given on the replacement of Dinas brickwork in the melting section of a tank furnace of the Gusev glassworks by the so-called semicold method, whereby the charge is thoroughly melted and air is then passed into the furnace to lower the temperature to about 400° to 500°C. before replacements are made. This method requires 6 to 12 days compared with 45 to 50 days for cold repairs. The glass is not adulterated because all the rubbish is swept off the set surface of the glass. Reheat caused no cracking or other defects of the Dinas lining. B.Z.K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

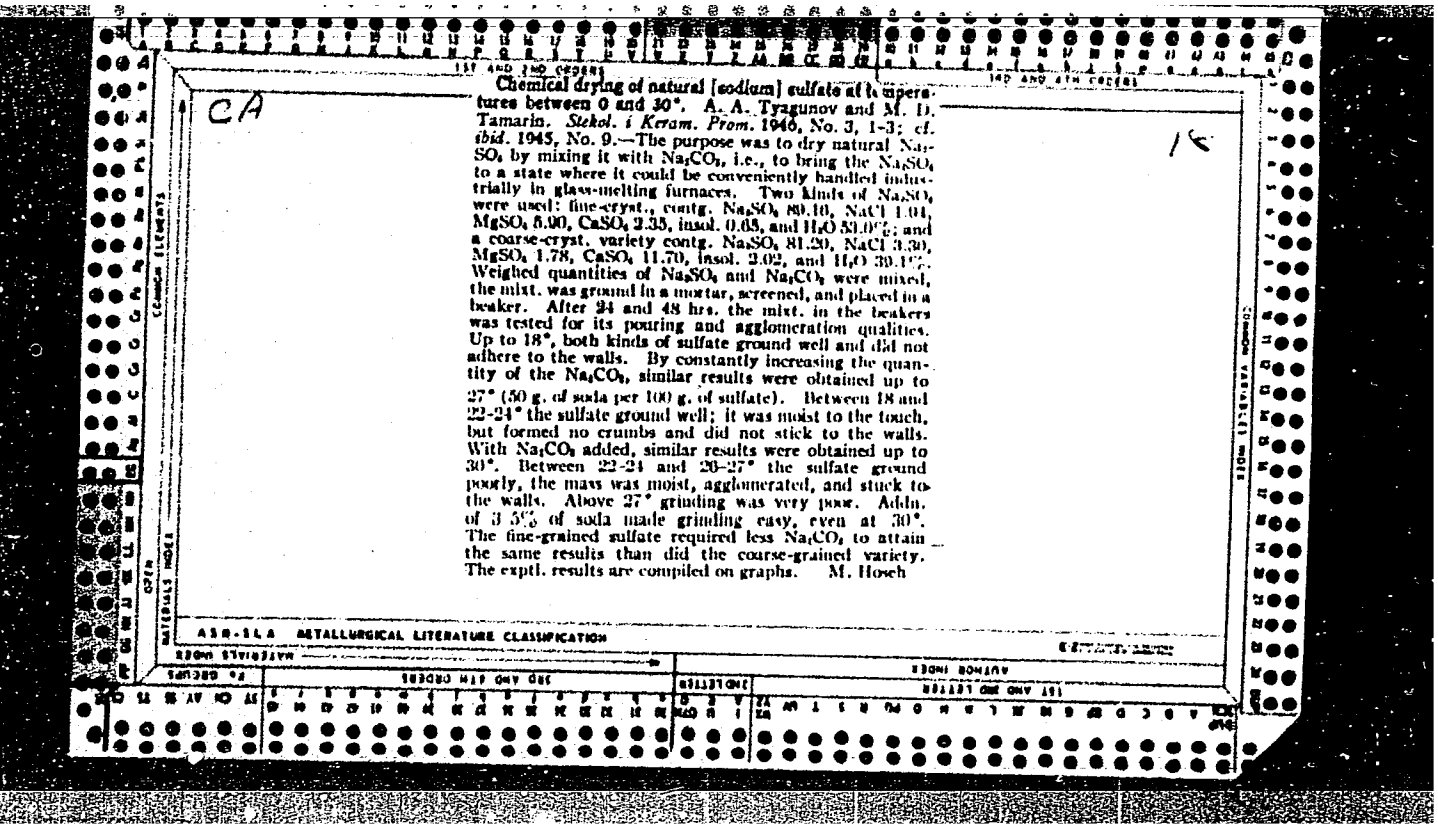


PROCESSES AND PROPERTIES INDEX

C

Chemical drying of natural sulfate at temperatures of 0° to 30°. A. A. Tyagunov and M. D. Tamarin. *Stekol'naya i Keram. Prom.*, 1946, No. 3, pp. 1-3. Course crystalline sulfate containing 53% moisture and fine crystalline sulfate containing 30% moisture were used in determining the drying characteristics when mixed with soda containing 2% moisture. In each experiment 100 gm. of the sulfate was mixed with 2, 5, 10, 15, or 50 gm. of soda and ground in a porcelain mortar at temperatures of 0° to 30° (5° intervals). The mixture was passed through a small laboratory sieve and, after 1 and 2 days, was poured from a height of 0.5 m. to observe the clumps and evaluate the storage characteristics. The results are plotted and can be used to determine the optimum addition of soda when drying sulfate. The composition of the natural sulfate varies widely, however, and for this reason the experiments must be performed with the sulfate on hand to determine the optimum soda addition. B.Z.K.

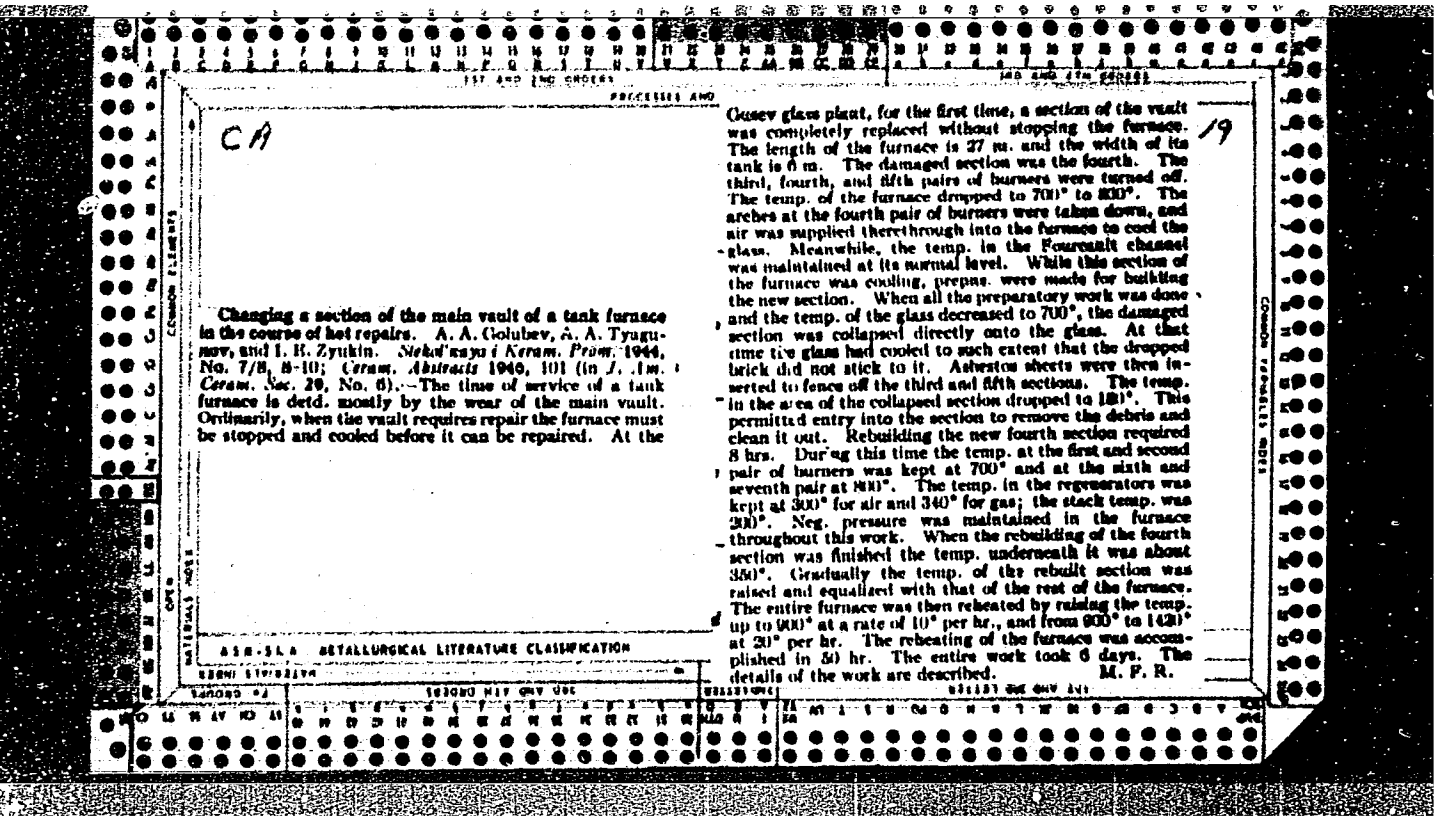
A 58-5 LA METALLURGICAL LITERATURE CLASSIFICATION



CA

Chemical drying of natural [sodium] sulfate at temperatures between 0 and 30°. A. A. Tyagunov and M. D. Tamarin. *Stekol. i Keram. Prom.* 1946, No. 3, 1-3; *cf. ibid.* 1945, No. 9.—The purpose was to dry natural Na_2SO_4 by mixing it with Na_2CO_3, i.e., to bring the Na_2SO_4 to a state where it could be conveniently handled industrially in glass-melting furnaces. Two kinds of Na_2SO_4 were used: fine-cryst., contg. Na_2SO_4 89.10, NaCl 1.01, $MgSO_4$ 5.90, $CaSO_4$ 2.35, insol. 0.65, and H_2O 59.0%; and a coarse-cryst. variety contg. Na_2SO_4 81.20, NaCl 3.30, $MgSO_4$ 1.78, $CaSO_4$ 11.70, insol. 2.02, and H_2O 30.1%. Weighed quantities of Na_2SO_4 and Na_2CO_3 were mixed, the mixt. was ground in a mortar, screened, and placed in a beaker. After 24 and 48 hrs. the mixt. in the beakers was tested for its pouring and agglomeration qualities. Up to 18°, both kinds of sulfate ground well and did not adhere to the walls. By constantly increasing the quantity of the Na_2CO_3, similar results were obtained up to 27° (50 g. of soda per 100 g. of sulfate). Between 18 and 22-24° the sulfate ground well; it was moist to the touch, but formed no crumbs and did not stick to the walls. With Na_2CO_3 added, similar results were obtained up to 30°. Between 22-24 and 26-27° the sulfate ground poorly, the mass was moist, agglomerated, and stuck to the walls. Above 27° grinding was very poor. Addn. of 3.5% of soda made grinding easy, even at 30°. The fine-grained sulfate required less Na_2CO_3 to attain the same results than did the coarse-grained variety. The exptl. results are compiled on graphs. M. Hoseh

/ 5

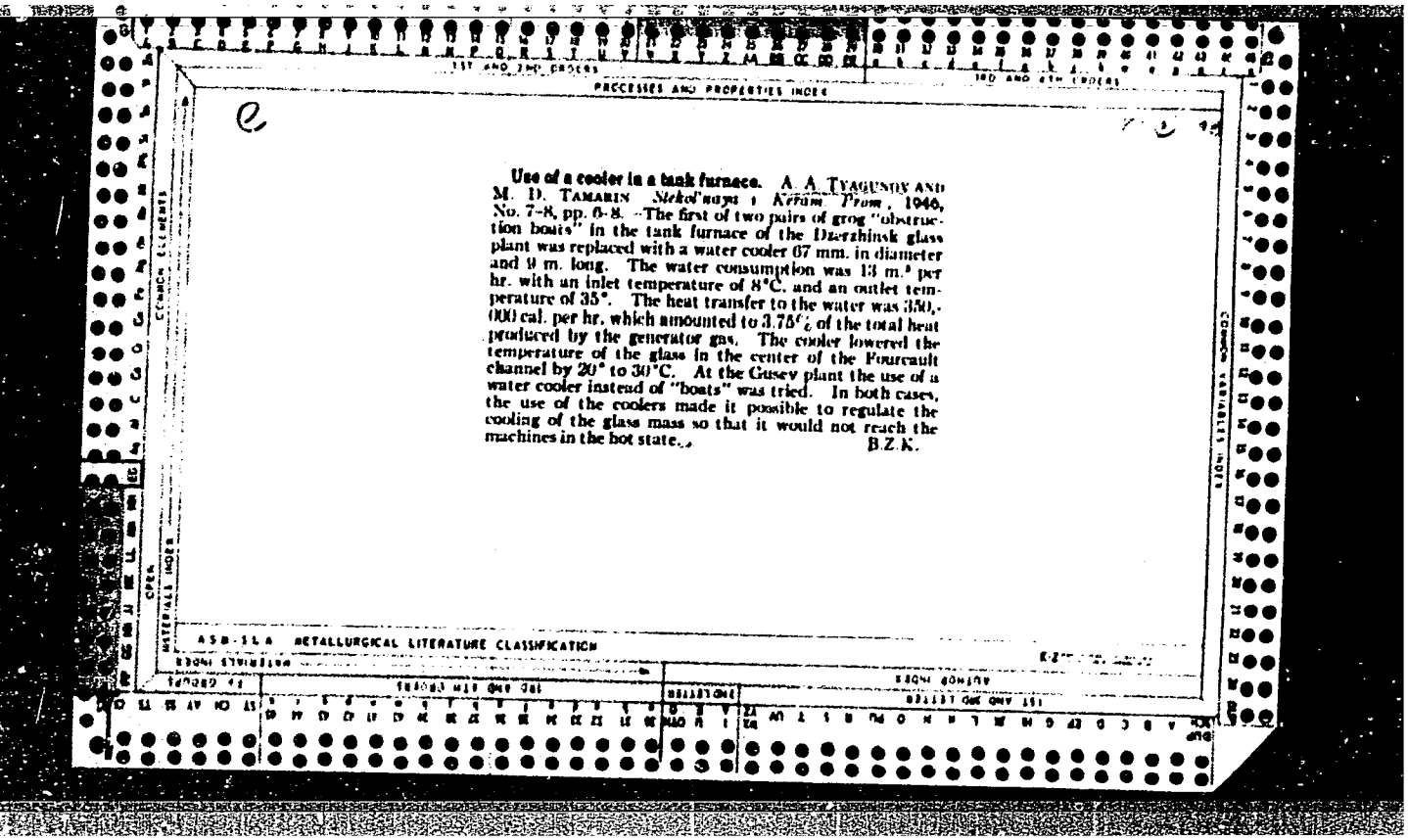


CA

19

Changing a section of the main vault of a tank furnace in the course of hot repairs. A. A. Golubev, A. A. Tyugunov, and I. E. Zyukin. *Steklo i Keram. Prom.* 1944, No. 7/8, 8-10; *Ceram. Abstracts* 1946, 101 (in *J. Am. Ceram. Soc.* 29, No. 6).—The time of service of a tank furnace is detd. mostly by the wear of the main vault. Ordinarily, when the vault requires repair the furnace must be stopped and cooled before it can be repaired. At the Gusev glass plant, for the first time, a section of the vault was completely replaced without stopping the furnace. The length of the furnace is 27 m. and the width of its tank is 6 m. The damaged section was the fourth. The third, fourth, and fifth pairs of burners were turned off. The temp. of the furnace dropped to 700° to 800°. The arches at the fourth pair of burners were taken down, and air was supplied therethrough into the furnace to cool the glass. Meanwhile, the temp. in the Fourcault channel was maintained at its normal level. While this section of the furnace was cooling, prepns. were made for building the new section. When all the preparatory work was done and the temp. of the glass decreased to 700°, the damaged section was collapsed directly onto the glass. At that time the glass had cooled to such extent that the dropped brick did not stick to it. Asbestos sheets were then inserted to fence off the third and fifth sections. The temp. in the area of the collapsed section dropped to 180°. This permitted entry into the section to remove the debris and clean it out. Rebuilding the new fourth section required 8 hrs. During this time the temp. at the first and second pair of burners was kept at 700° and at the sixth and seventh pair at 800°. The temp. in the regenerators was kept at 300° for air and 340° for gas; the stack temp. was 300°. Neg. pressure was maintained in the furnace throughout this work. When the rebuilding of the fourth section was finished the temp. underneath it was about 350°. Gradually the temp. of the rebuilt section was raised and equalized with that of the rest of the furnace. The entire furnace was then reheated by raising the temp. up to 900° at a rate of 10° per hr., and from 900° to 1420° at 20° per hr. The reheating of the furnace was accomplished in 50 hr. The entire work took 6 days. The details of the work are described. M. F. R.

A58-5LA METALLURGICAL LITERATURE CLASSIFICATION

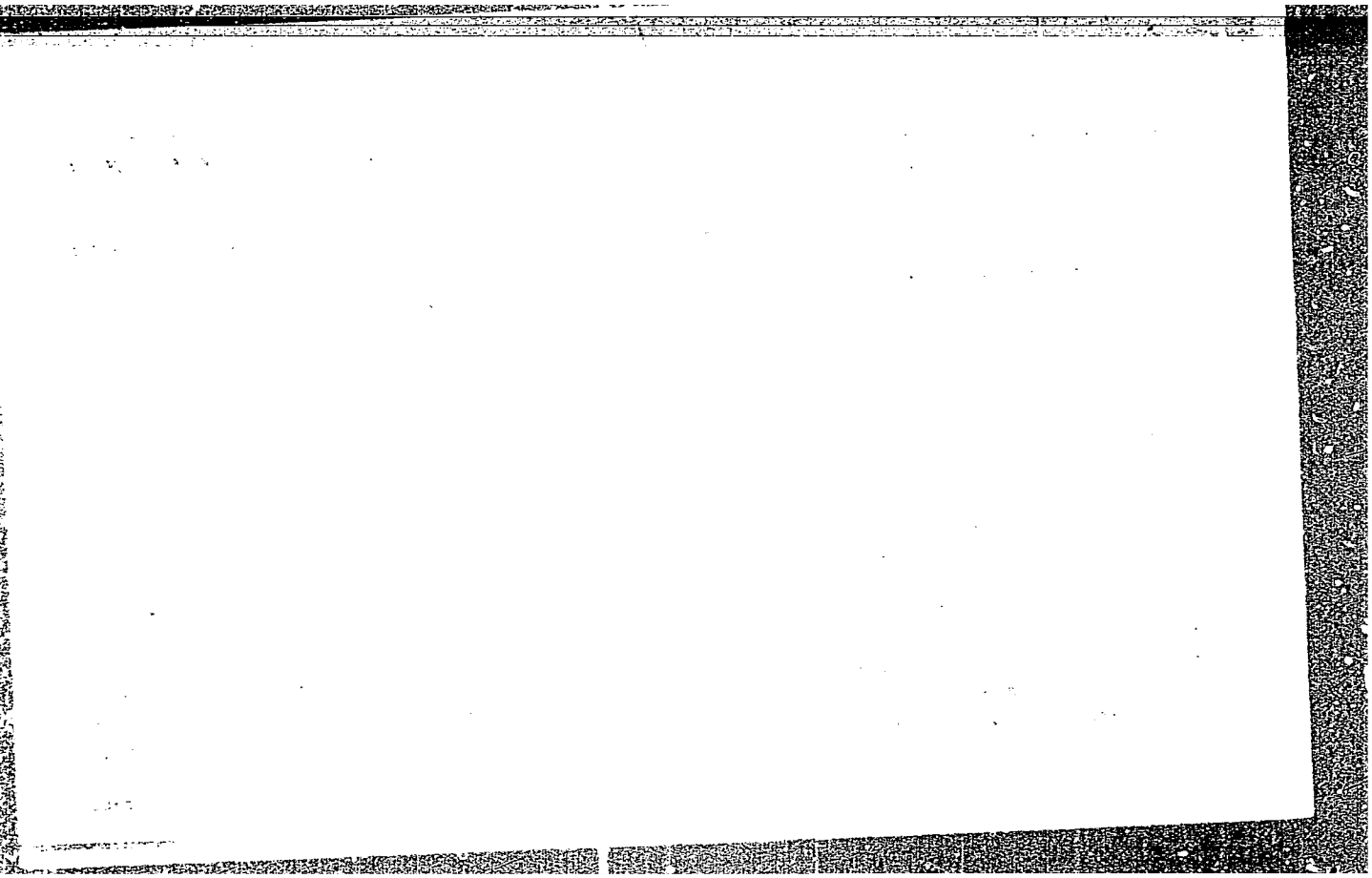


PROCESSES AND PROPERTIES INDEX

Use of a cooler in a tank furnace. A. A. TYAGUNOV AND M. D. TAMARIN. *Steklo'naya i Keram. Prom.*, 1946, No. 7–8, pp. 6–8.—The first of two pairs of grog "obstruction boats" in the tank furnace of the Dzerzhinsk glass plant was replaced with a water cooler 67 mm. in diameter and 9 m. long. The water consumption was 13 m.³ per hr. with an inlet temperature of 8°C. and an outlet temperature of 35°. The heat transfer to the water was 350,000 cal. per hr. which amounted to 3.75% of the total heat produced by the generator gas. The cooler lowered the temperature of the glass in the center of the Fourcault channel by 20° to 30°C. At the Gusev plant the use of a water cooler instead of "boats" was tried. In both cases, the use of the coolers made it possible to regulate the cooling of the glass mass so that it would not reach the machines in the hot state.

B.Z.K.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



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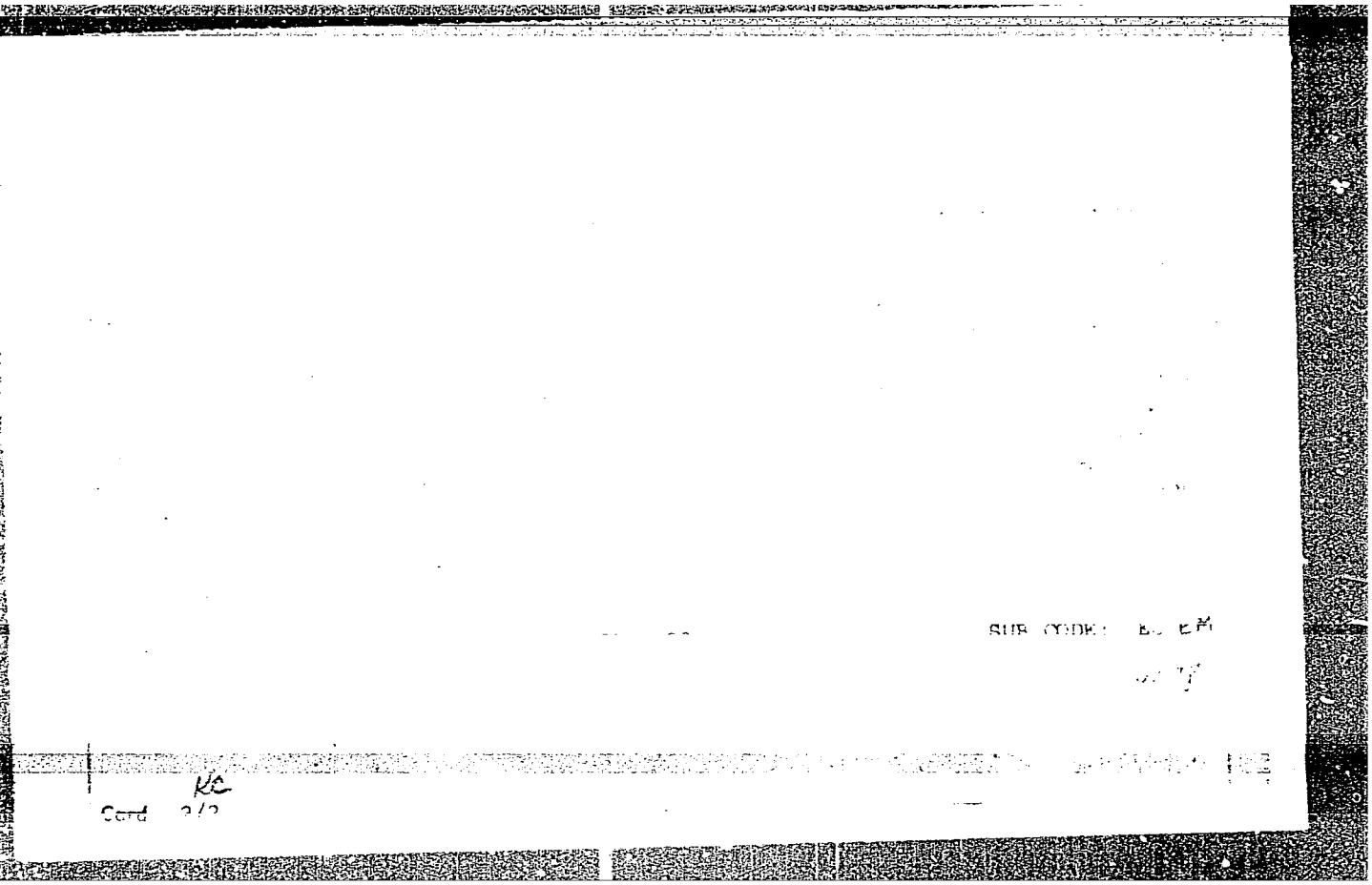

L 1271-66

ACCESSION NR: AP5020245 UR/0160/65/000/004/0092/0093
621.374.4.001

AUTHOR: Brandt, A. A.; Tyagunov, A. V.

TITLE: On the theory of the frequency multiplier in a gas discharge in a strongly nonuniform SHF field

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 4, 1965, 92-93

TOPIC TAGS: plasma physics, gas discharge, external magnetic field, electron collision

ABSTRACT: The authors study the possibilities of the mechanism of frequency multiplication for gas discharge multipliers with a nonuniform field. The model examined is a cylindrical condenser filled with a plasma. An ac voltage $u = U_0 \sin \omega t$ is applied to the linings of this condenser. The entire system is located in an axially symmetric magnetic field directed along the axis of the condenser. In order to increase the amplitude of electron oscillations in the plasma, the magnetic field strength is chosen in such a way that the Larmor frequency of electron rotation is equal to the frequency of the applied voltage. It is assumed that an electron loses

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L 1271-66

ACCESSION NR: AP5020245

energy only by collisions with molecules. The stationary orbit of an electron is

$$a = \frac{eu_0}{2m\gamma\omega r \ln \frac{r_2}{r_1}},$$

where e, m are the charge and mass of the electron, γ is the collision frequency, r is the distance from the center of the orbit to the axis of the system, r_1, r_2 are the radii of the internal and external conductors of the condenser. The shape of the induced current signal is calculated and an example is given with specific parameters. It is found that conversion (multiplication) efficiency is increased as pressure is reduced, since energy losses due to collisions are reduced. With operation unsing electron beams, where there are no collisions and the power of the fundamental frequency depends only on electron recoil, the multiplication efficiency of any harmonic approaches 100%. Orig. art. has: 1 figure, 2 formulas, 1 table.

ASSOCIATION: Kafedra fiziki kolebaniy Moskovskogo gosudarstvennogo universiteta (Department of Physics of Oscillations, Moscow State University)

SUBMITTED: 01Feb65 ENCL: 00 SUB CODE: ME

NO REF SOV: 002 OTHER: 000

Card 2/2

BRANDT, A.A.; KAMINSKIY, V.N.; TYAGUNOV, A.V.

Study of a plasma frequency multiplier. Vest. Mosk. un. Ser. 3: Fiz., astron. 20 no.1:82-84 Ja-F '65. (MIRA 18:3)

1. Kafedra fiziki kolebaniy Moskovskogo universiteta.

BRANDT, A.A.; TYAGUNOV, A.V.

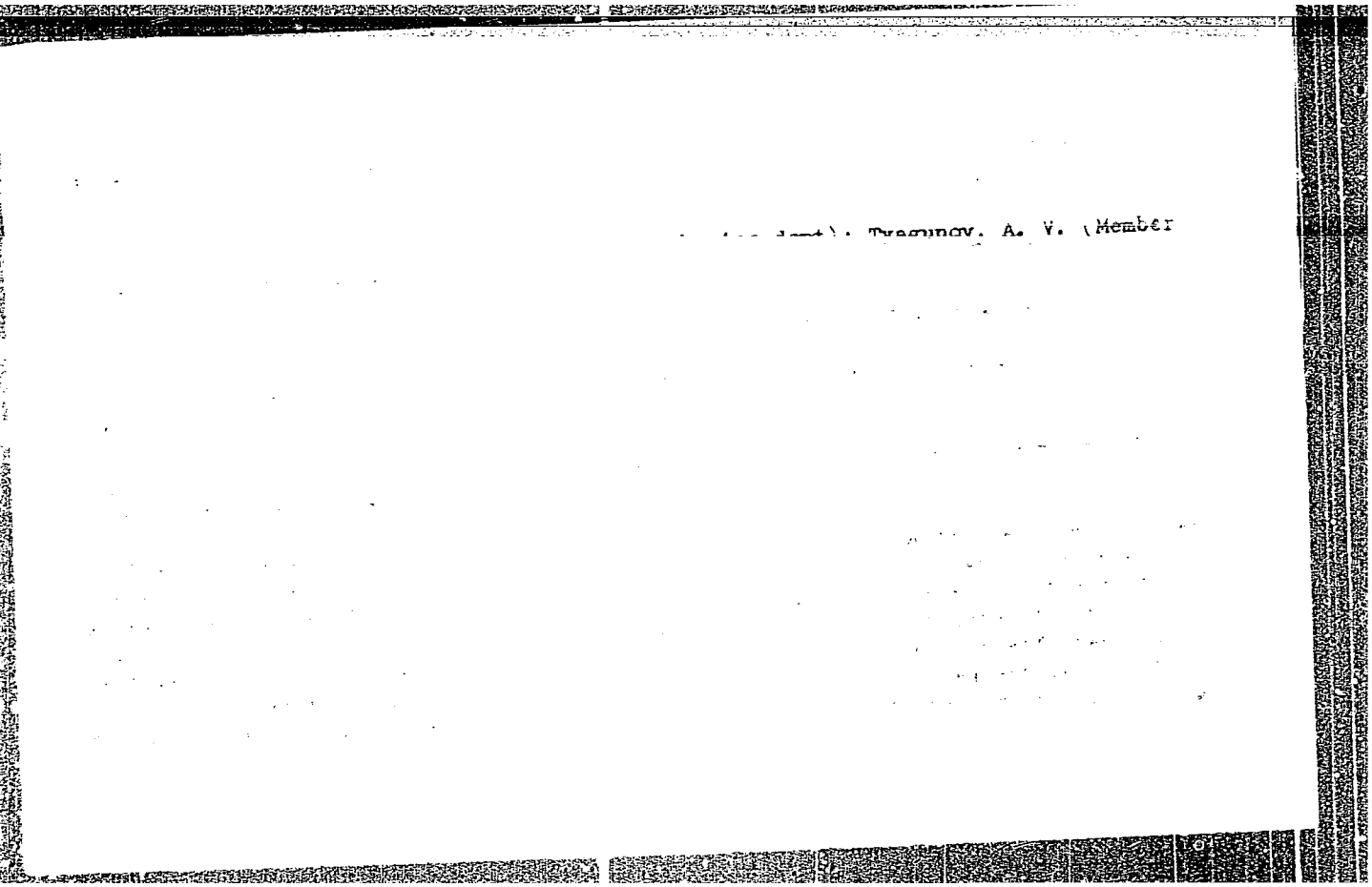
Theory of a frequency multiplier in a gas discharge within a highly nonuniform superhigh-frequency field. Vest. Mosk.un. Ser. 3: Fiz., astron. 20 no.4:92-93 Jl-Ag '65. (MIRA 18:12)

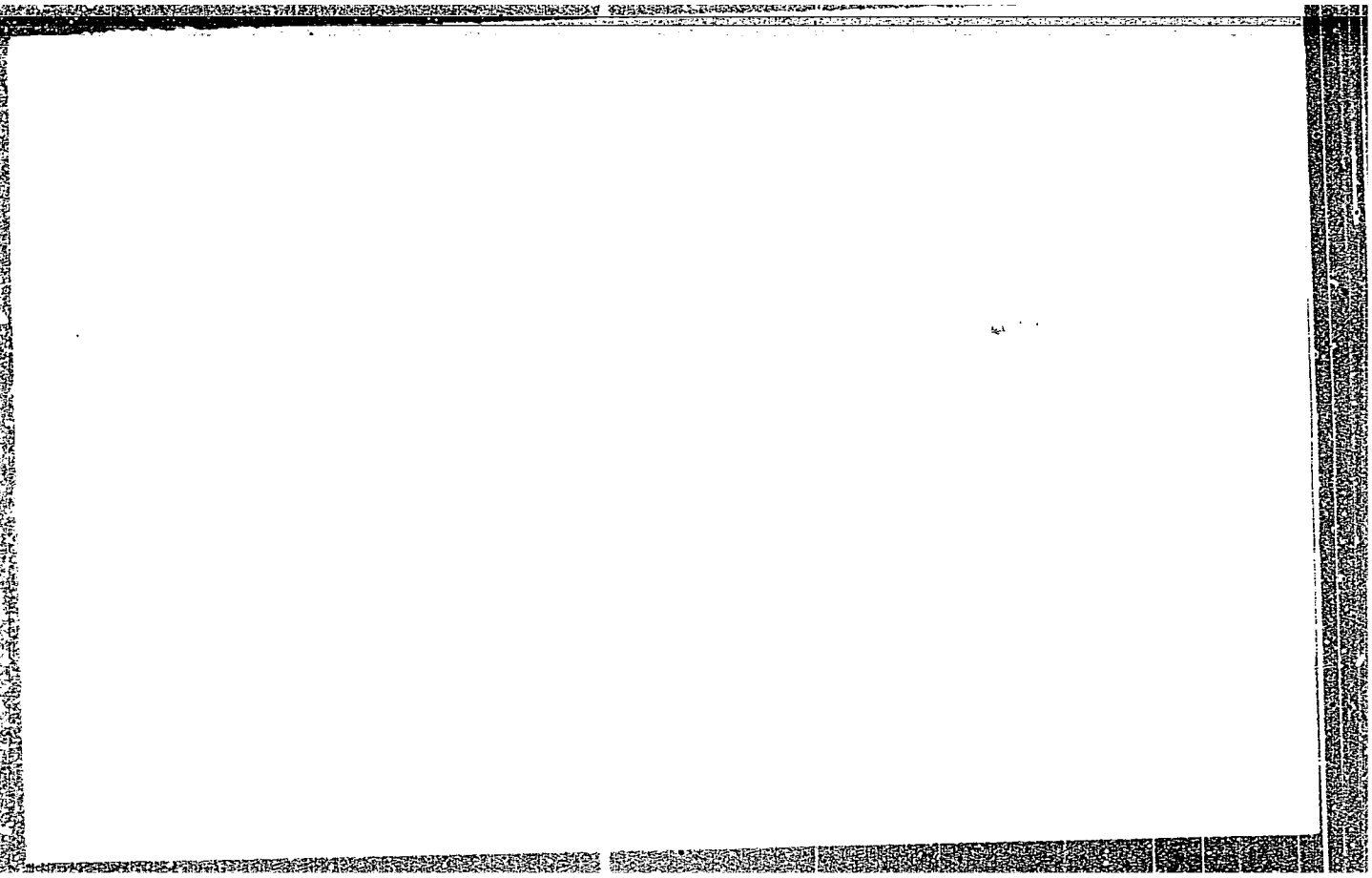
1. Kafedra fiziki kolebaniy Moskovskogo gosudarstvennogo universiteta. Submitted February 1, 1965.

BRANDT, A.A.; TYAGUNOV, A.V.

Frequency multiplier for operation in the 3-cm. band using gas-discharge plasma in a nonuniform electrical field. Radiotekh. i elektron. 11 no.1:154-156 Ja '66. (MIRA 19:1)

1. Submitted March 27, 1965.





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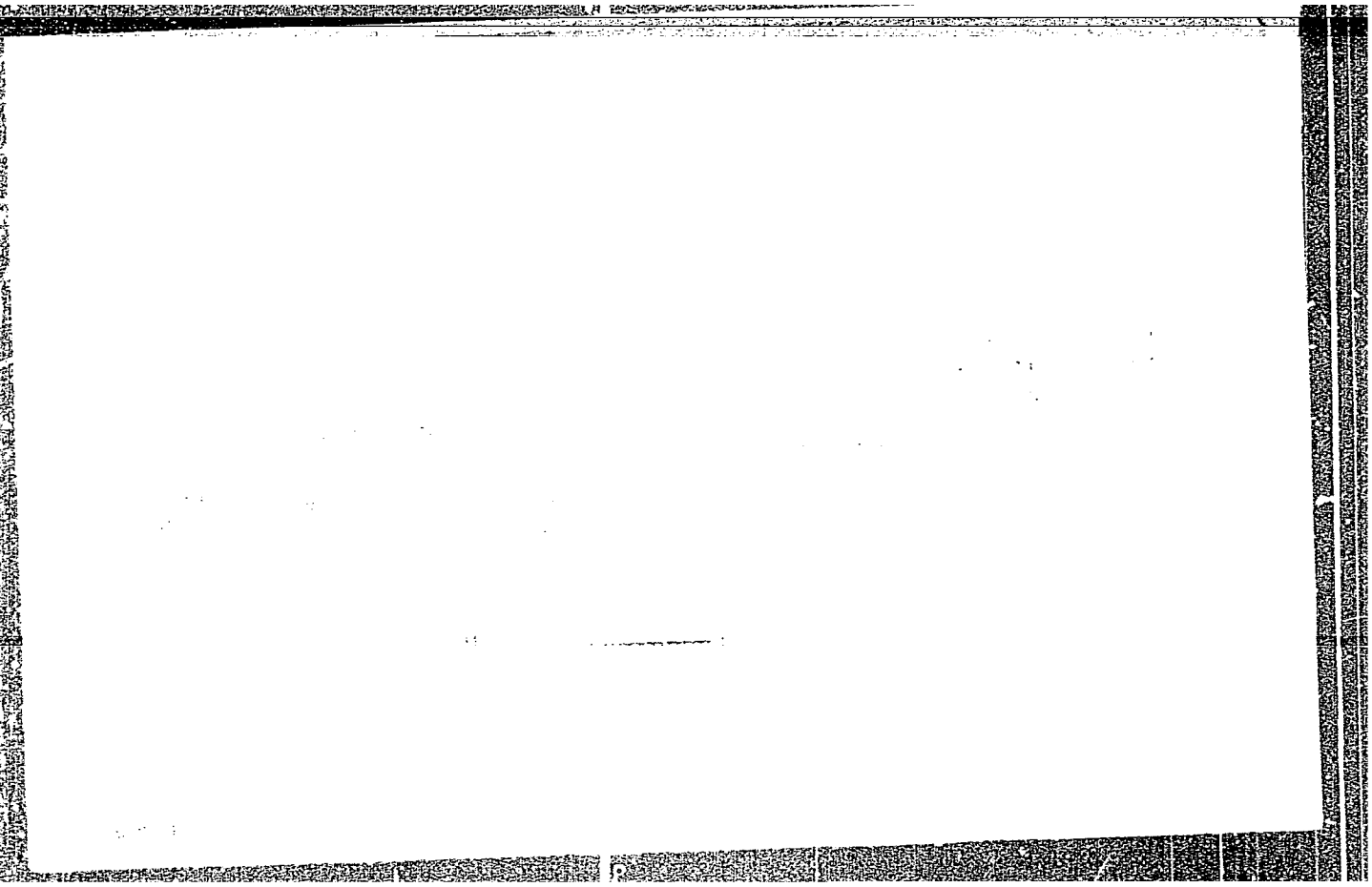

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ALEKSANDROV, B.A.; BRANDT, A.A.; TYAGUNOV, A.V.

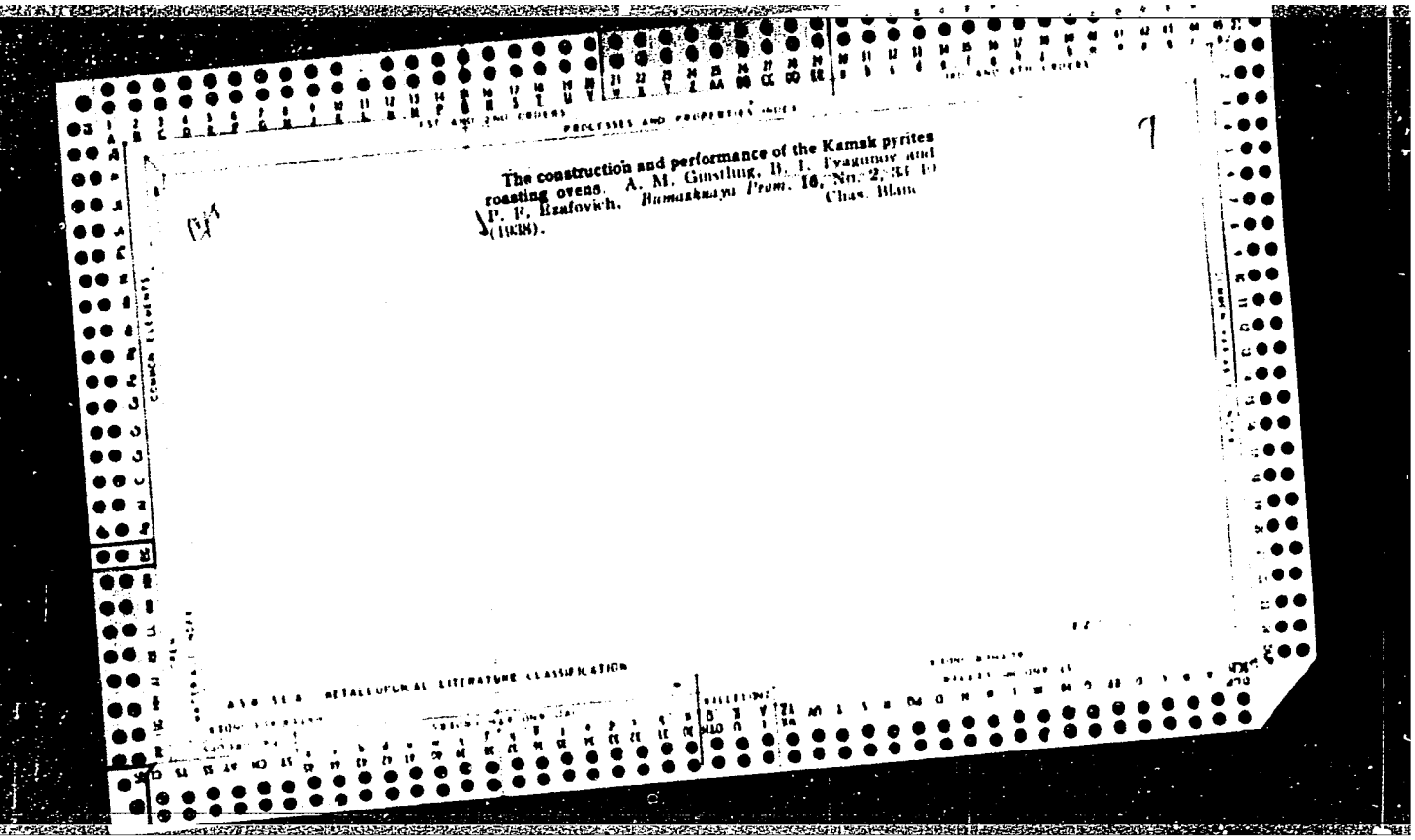
Decimeter frequency multiplier in a gas discharge within a nonuniform electric field. Vest. Mosk.un. Ser. 3: Fiz., astron. 20 no.4:91 Jl-Ag '65.

(MIRA 18:12)

1. Kafedra fiziki kolebaniy Moskovskogo gosudarstvennogo universiteta. Submitted February 1, 1965.

KUNAKOV, N.Ye.; EPSHTEYN, S.L.; TYAGUNOV, B.I.; KIVIT, A.A.

Experimental industrial installation for thermal processing of shale smalls with solid agents for heat transfer. Gaz.prom.no.9:8-12 S '56. (MLRA 9:10)
(Oil shales) (Heat engineering)

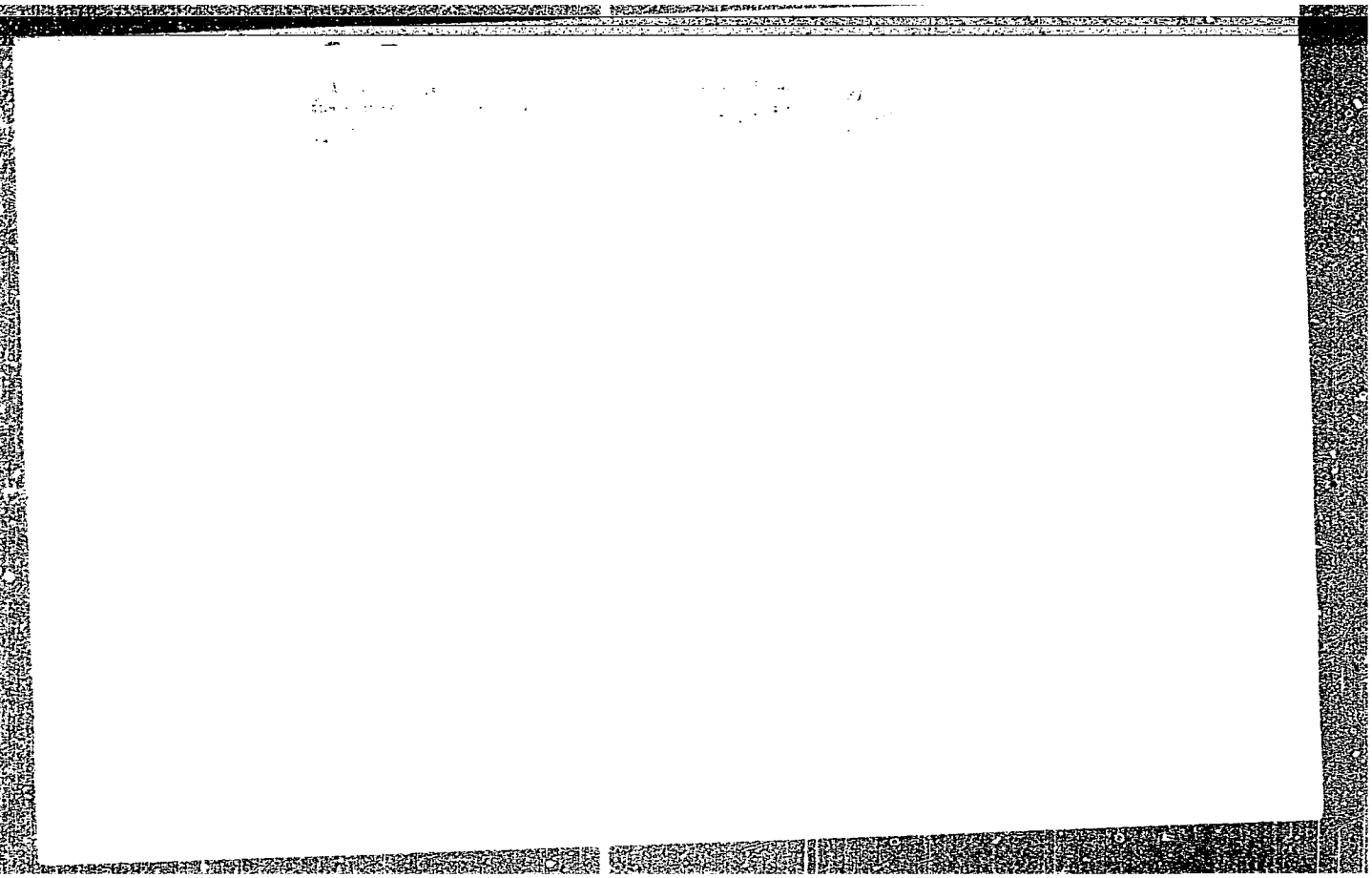


The construction and performance of the Kamsk pyrites roasting ovens. A. M. Ginstling, B. I. Tvaunov and P. F. Rzafovich. *Bumazhnaya Prom.* 16, No. 2, 31 (1938).

TYAGUNOV, B.I."

"Power-Chemical Exploitation of Shale Lignites of Esthonia with the Aid of a Solid Heat Carrier,"

paper submitted for the 1st National Congress, Czechoslovak Scientific Technical Society for Fuel Utilization. Karlovy Vary. Czechoslovakia, 12-17 May 58.



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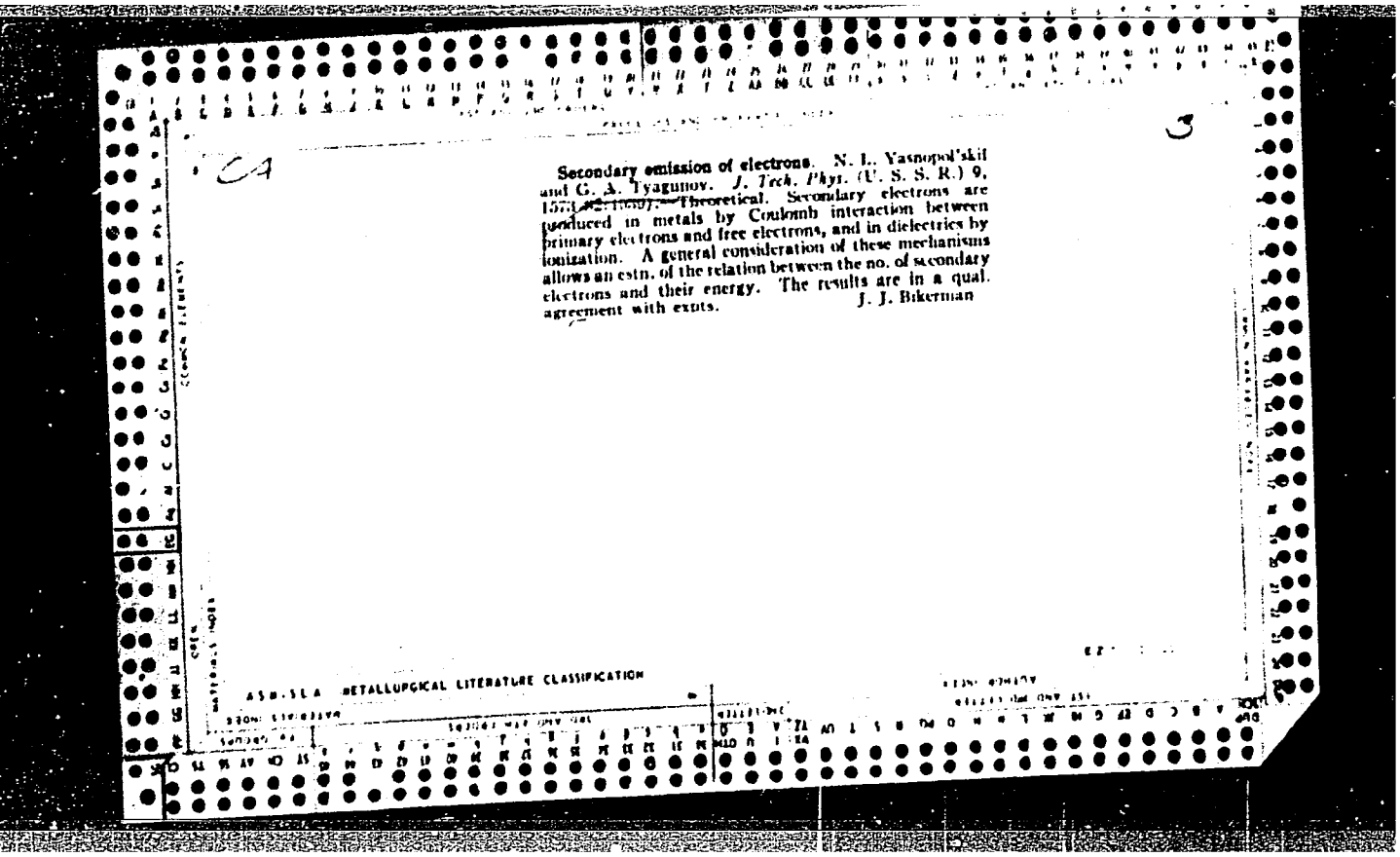


Secondary emission of electrons. N. L. Yasnopol'skii and G. A. Tyagunov. *J. Tech. Phys.* (U. S. S. R.) 9, 157[illegible]. Theoretical. Secondary electrons are produced in metals by Coulomb interaction between primary electrons and free electrons, and in dielectrics by ionization. A general consideration of these mechanisms allows an estn. of the relation between the no. of secondary electrons and their energy. The results are in a qual. agreement with exptl. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

TYAGUNOV, G. A.

TYAGUNOV, G. A.

Tyagunov, G. A. defended his Doctor's dissertation in the Moscow Power Engineering Institute in Molotov, USSR, on 26 December 1947, for the academic degree of Doctor of Technical Sciences.

Dissertation: "Fundamentals for the Calculation of Vacuum Systems".
Resume: Tyagunov treated in detail the theory of the calculation of systems used for creation of a vacuum in electronics and physics installations. He covered the simplest systems (for stationary, nonstationary, and quasi-stationary conditions) as well as typical more complex systems.

Official Opponents: Profs. A. K. Timiryazev and S. O. Gvozdover (Doctors of Physicomathematical Sciences); I. L. Kaganov (Doctor of Technical Sciences).

SO: Elektrichestvo, No. 7, Moscow, August 1953, pp 87-92, (W/29344, 16 Apr 54)

TYAGUNOV, G. A.

D-46 TYAGUNOV. G.A. Elektrovakuumnyye pribory (Electrical vacum devices). Moscow, Gosenergoizdat, 1949. 384p.
DLC TK7872.V3T5; OUHF No. 198-B.

The elementary theory and physics of the operation of various vacumn devices, especially radio ones. The book is approved by the school department of the Ministry of the Communications Appliances Industry of the USSR as a textbook for the middle technical schools.

TYAGUNOV, G. A.

Author: Tiagunov, G. A.

Title: Ion instruments. (Ionnye pribory) -p.

City: Leningrad

Publisher: State Scientific and Technical Publication of Power Engineering

Date: 1950

Available: Library of Congress

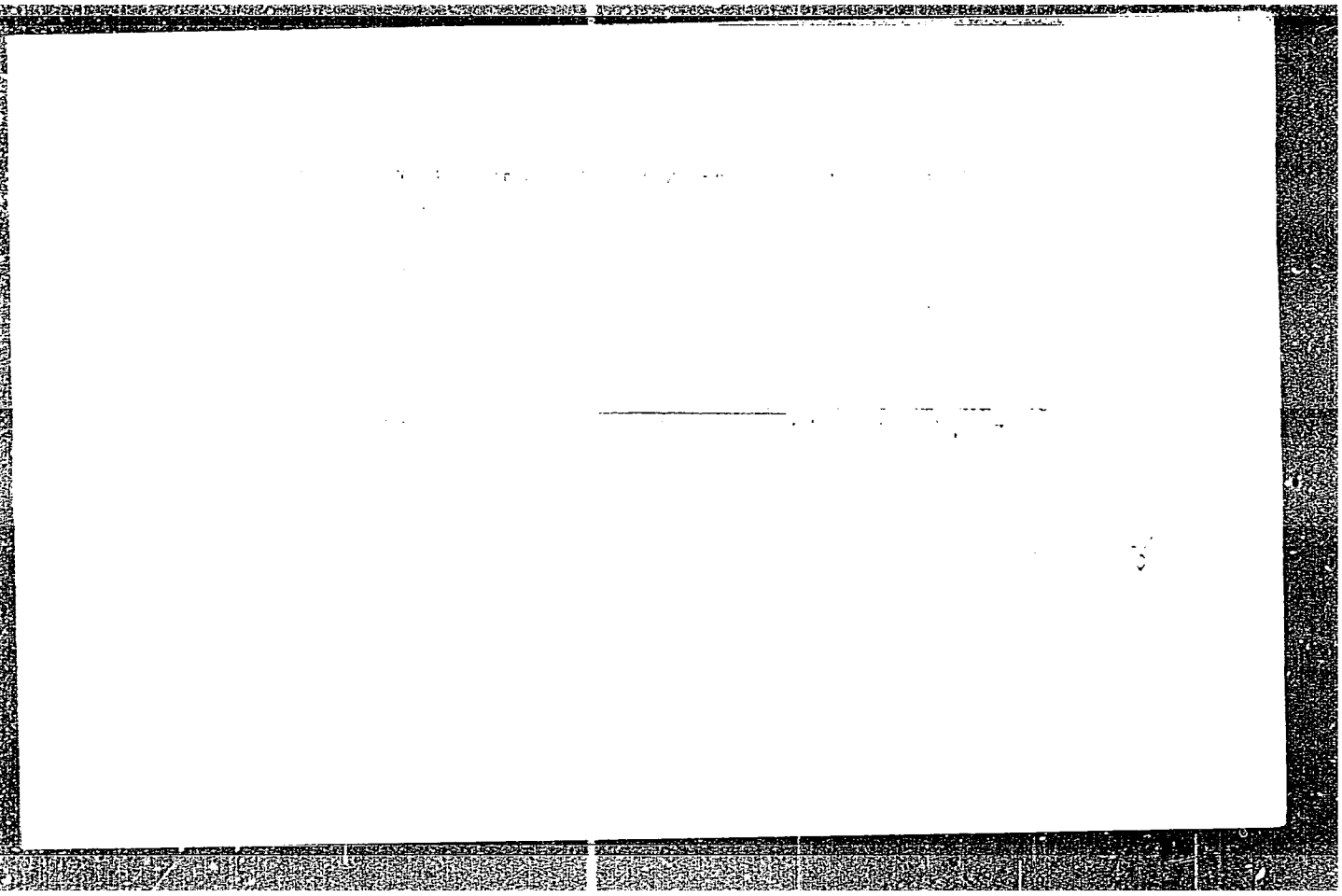
Source: Monthly List of Russian Accessions, Vol. 4, No. 5, p. 313

Call No: TK7872.V3T53

Subject: 1. Vacuum tubes. 2. Electric discharges through gases.

SHAPOSHNIKOV, A.A., d. 1942; ZHIGAREV, A.A., redaktor; TYAGUNOV, G.A., redaktor.

[Electronic and ionic instruments] Elektronnye i ionnye pribory. [4. izd., perer.] Moskva, Gos. energ. izd-vo, 1952. 336 p. (MLRA 7:1)
(Electron tubes)



TYAGUNOV, G. A.

A. A. Zhigarev, M. I. Men'shikov, G. A. Tyagunov, Vakuumnaya tekhnika /Vacuum Technology/, series of instructional charts, Gosenergoizdat, 12 charts, 5,000 copies

This series of instructional charts consists of colored placards, each of which shows pictures of different pieces of vaccum apparatus, indicates the principles of their operation, the place of application, and their main parameters: rotary pump for preliminary rarefaction; manometers for low-pressure measurements; a modern vacuum assembly, designed to exhaust large volumes; a laboratory-type glass vacuum installation; leak-finders.

The material of these tables is designed for the intermediate technical staff (technicians, laboratory assistants) of plants and laboratories, who deal with vacuum instruments and installations, and also for engineers of specialties involving vacuum technology.

SO: U-6472, 23 Nov 1954

ZHIGAREV, A.A.; MEN'SHIKOV, M.I.; TYAGUNOV, G.A.

[Vacuum apparatus; study charts] Vakuumnaia tekhnika; uchebnye tablitsy. Moskva, Ges. energ. izd-vo, 1955. (MLRA 9:5)
(Vacuum apparatus)

TYAGUNOV, G.A.

Heat calculation of cathodes of devices with a low discharge in gas.
Shor.nauch.rab.MIFI no.9:17-21 '55. (MLRA 10:1)
(Electric discharges through gases)

TYAGUNOV, G.A.; NEKRASOVA, I.F.

Calculating homogeneous metal cathodes. Sbor.nauch.rab. MIFIno.9:22-31 '55. (MLRA 10:1)
(Electric tubes)

TYAGUNOV, G.A.

Some problems of producing a high vacuum. Sbor.nauch.rab.MIFI no.9:57-63 '55. (MIRA 10:1)

(Vacuum apparatus)

TYAPKIN, Yu.D.

"Monoclinic" distortions of the cubic lattice of Ni - Be and Cu - Be alloys due to aging. Dokl. AN SSSR 154 no. 3:578-581 Ja '64. (MIRA 17:5)

1. Institut metallovedeniya i fiziki metallov TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I.P.Bardina. Predstavleno akademikom G.V.Kurdyumovym.

Tyagunov G.A.

AUTHORS: Val'dner, O.A., Milovanov, O.S., Tyagunov, G.A., Shal'nov, A.V. 89-7-7/32

TITLE: A Linear Electron Accelerator for 4.5 MeV (Lineynyy elektronnyy uskoritel' na 4.5 Mev)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 7, pp. 41-44 (USSR)

ABSTRACT: The accelerator discussed here has two divided sections for the purpose of being used as elements of a cyclical accelerator. The first section serves as an injector and the second as an accelerating element. The main nodes of the linear accelerator are shown in a schematical drawing. Furthermore, compensation of the defocusing forces is discussed in short. The technical computation of the wave conductor with diaphragm deals with two main problems: with the determination of the geometrical dimensions and with the dynamic of the motion of the electrons in the accelerated system. The initial data for the computation are given. The dynamic of the particles in the accelerated system is computed here by means of Slater's method. The geometrical dimensions were precisely determined with the help of experimentally determined dispersion curves. Experimental Results: Some preliminary operations took place before starting the linear accelerator: The section was tuned to a

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A Linear Electron Accelerator for 4.5 MeV 89-7-7/32

low level of efficiency by means of a measuring generator. After tuning-in of the highfrequency section, injection and focusing of the electron beam was investigated. The coil was adjusted by two methods: provisionally by means of the ray of a centrifuge in the case of a lacking accelerated field, and finally with the help of a ray of accelerated electrons. Next, the parameters of this accelerator were investigated. The energy of the accelerated electrons and their spectrum was determined by means of a spectroscopic analyzer. The spectra recorded by this analyzer are shown in a diagram. The ratio E/E amounts to 6% and 8% for the first and second sectors respectively. The investigation of the dependence of the energy of the accelerated electrons in the first section upon the length of the wave produced by the magnetron is also of great interest. Also this dependence is shown in form of a diagram. The accelerator described here was constructed for laboratory use. The results obtained will permit the construction of a more perfect accelerator model. There are 5 figures and 7 references, 0 of which are Slavic.

SUBMITTED: November 9, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Electron accelerators-Design 2. Electron accelerators-Test results 3. Electron accelerators-Equipment

TYAGUNOV, G A

PA - 2021

AUTHOR: Not Given.
TITLE: New Books.
PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 1, p 81 (U.S.S.R.)
Received: 2 / 1957 Reviewed: 3 / 1957

ABSTRACT: M.I.VITENBERG: Computation of electromagnetic relays for apparatus of automation and communication. Gosenergoizdat, M.L.1956, 464 pages, price 14.50 roubles.
Theory and computation of the electromagnetic relays of parallel- and alternating current for apparatus of automation and communication. Analytical and graphoanalytical methods of computations, constructions, test data. The book is destined to be used by engineers and technical engineers.

M.P.KAPLANOV, V.A.LEVIN: The automatic foundation of frequency, 2.enlarged edition. Gosenergoizdat, M.L. 1956, 200 pages, price 11.50 roubles.
Description and classification. Computation formulae for construction. The book is for radio specialists and advanced university students.

The Successes attained by Electrovacuum Engineering, edited by Prof. G.A.TJAGUNOV, L.M.Gosenergoizdat, 1956, 256 pages, price 10.25 roubles.
A collection of articles on the types, computation methods, properties, and physical phenomena of some new types of electrovacuum de-

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vices. For students, university professors, and engineers.

F.V.MAJOROV: Electron Regulators. M. Gosenergoizdat, 1956, 492 pages, price 14.20 roubles.
Elements and assemblies of electron regulators with uninterrupted and discrete effect as well as practical schemes.

P.V.SAHAROV: Technology of apparatus construction. Vol 1. Special features of electro-apparatus construction. Technology of current-carrying parts and magnetic conductors. M-L-Gosenergoizdat, 1956, 315 pages, price 7.85 roubles. Construction, technical production.

ASSOCIATION: Not given.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 2/2

TYAGUNOV G. A.

89-3-9/30

AUTHORS: Vaynshtok, O. A., Milovanov, O. S., Tyagunov, G. A., Shalimov, A. V.

TITLE: A 6 MeV Linear Accelerator for Electrons (Lineynyy elektronnyy uskoritel' na 6 MeV)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 3, pp. 285 - 285 (USSR)

ABSTRACT: The accelerators earlier described (reference 1) were improved so that they can now supply 6 MeV electrons without having made it necessary to increase the high-frequency input power. The improvement was obtained by a redesign of the second section of the accelerator where the velocity of wave propagation is equal to the velocity of light. In this section the radius a of the shutter was decreased so much that $a/\lambda = 0,13$ (earlier it was 0,17). This made possible an increase of the electric field strength along the axis of up to 30 kV/cm. A widening of the spectrum of energy of the accelerated particles was observed as a consequence of the increase of energy (10 % compared with earlier 8 %). There is 1 reference.

21(9)

SOV/112-59-2-3683

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 207 (USSR)

AUTHOR: Val'dner, O. A., Milovanov, O. S., Tyagunov, G. A., and Shal'nov, A. V.

TITLE: Linear Electron Accelerator 6 Mev
(Lineynyy elektronnyy uskoritel' na 6 mev)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Radiotekhnika, 1958, Nr 2, pp 222-230

ABSTRACT: The Chair of Electrophysical Outfits, Moscow Engineering-Physics Institute, designed a linear traveling-wave electron accelerator that comprises two sections: the bunching section (accelerating the electrons from 0.4 to 0.97 of the velocity of light), and the accelerating section (bringing the velocity closely to that of light). The sections are connected by a sylphon passing the electrons and by a waveguide matching unit. Ultrahigh-frequency oscillations are derived from a magnetron which is fed by 2.5-microsec pulses with a

Card 1/2

Linear Electron Accelerator 6 Mev

repetion frequency of 400 cps. Phase shifters are provided at the inputs of both sections. The first section consists of a copper tube (also serving as a vacuumtight envelope) of 90-mm internal diameter; copper diaphragms are secured by the heat-fit method (by liquid-nitrogen cooling). The fosuing coil is slipped over the copper tube. The second section consists of rings held together by longitudinal pins; it has a separate vacuumtight enclosure. The accelerator operates with continuous pumping (seven TsLV-100 pumps, liquid-nitrogen traps). Its current is up to 30 ma; the energy at the first section output is 3.5Mev, and at the second section output, 6.5 Mev. Methods of design, experimental characteristics, and possible applications are indicated. Bibliography: 9 items.

P.K.S.

Card 2/2

TYAGUNOV, G.A.

Scientific conference of the Moscow Engineering and Physics Institute. Atom. energ. 5 no.2:192-193 Ag '58. (MIRA 11:8)
(Physics--Congresses)

TYAGUNOV, G.A., prof., doktor tekhn.nauk, red.; NEGRIMOVSKAYA, R.A., tekhn.red.

[Linear accelerators; a collection of articles] Lineinye uskoriteli; sbornik statei. Pod red. G.A.Tiagunova. Moskva, 1959. 94 p. (MIRA 12:6)

1. Moscow. Inzhenerno-fizicheskiy institut.
(Particle accelerators)

GASYUK, N.S.[translator]; BEL'KIND, L.D., prof., doktor tekhn.nauk, red.; TYAGUNOV, G.A., prof., doktor tekhn.nauk, red.; GAVRILOV, S.S., tekhn.red.

[International electrotechnical dictionary] Mezhdunarodnyi elektrotekhnicheskii slovar'. Izd.2. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Group 07 [Electronics] Elektronika. 1959. 331 p. (MIRA 12:4)

1. World Power Conference. U.S.S.R.National Committee. (Electronics--Dictionaries)

TYAGUNOV, G.A.

Terminology in the field of transistor electronics. Izv. vys. ucheb. zav.; radiotekh. 2 no.6:751-753 N-D '59. (MIRA 13:6)

1. Kafedra elektrofizicheskikh ustanovok Moskovskogo inzhenerno-fizicheskogo instituta.
(Transistors--Terminology)

21 (0), 24 (0) SOV/89-7-2-18/24

AUTHOR: Tyagunov, G. A.

TITLE: Scientific Conference of the MIFI (Nauchnaya konferentsiya MIFI)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 2, pp 176-177 (USSR)

ABSTRACT: The yearly scientific meeting was held from 17 April to 15 May 1959 in the Moskovskiy inzhenerno-fizicheskiy institut (Moscow Physical Engineering Institute). More than 600 participants from 100 different institutes attended the 2 plenary and 18 sectional conferences. A total of 148 lectures were held. The following lectures are specially mentioned: M. K. Romanovskiy on the thermo-nuclear examinations, N. G. Basov on the physical foundations of molecular generators and amplifiers, A. I. Leypunskiy on the construction of a fast reactor, I. Ya. Pomeranchuk on the theory of the peripheral collision of mesons and nucleons, A. B. Migdal on superfluidity and momentum of inertia of the nuclei, A. S. Kompaneyets on the strong electromagnetic gravity wave, V. I. Gol'danskiy on levels which are excited within the nucleus shell and methods of comprehending them, I. L. Rozental' and L. A. Prokhorova on the analysis of the possible experiments for the determination of the measurements of the μ-mesons, V. I. Dianov-Klokov on the spectrum of liquid and

Card 1/3

Scientific Conference of the MIFI

crystalline hydrogen under pressure (8000-10000 atm) and an instrument for measuring the absorption curves, V. K. Lyapidevskiy and O. V. Glamazdina on new application possibilities of the diffusion chamber, A. V. Shal'nov on calculation methods for linear electron accelerators with migratory waves, P. A. Ryazin, A. B. Minervin and A. I. Zaboyev on new theories of the electron capture under betatron conditions of the acceleration, Ye. G. Pyatnov on optimum wave length for a generator, S. P. Lomnev and G. A. Tyagunov on magnetic focussing in a linear electron accelerator, O. A. Val'dner, P. A. Dmitrovskiy, D. M. Zorin, Yu. V. Mizin on the 3 mev linear accelerators of the MIFI, and V. V. Kuznetskiy, O. A. Val'dner, V. V. Kotov and V. N. Chesnokov on examination of the electron movement in the system of the elutron with consideration of the scattering fields, O. A. Krayev on impulse method for measuring the heat conduction capacity of liquids and the theory of this method, Ye. M. Khabakhpasheva, Yu. M. Il'in and D. A. Chirov on heat transmission to the eutectic Na-K which flows in a circular space, V. I. Petrovichev on heat transmission to circulating mercury, N. M. Royzin on special conditions when working with a flat triode in

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the impulse technique, O. S. Poturayev on calculation methods and construction of an impulse transformer for instruments with semi-conductor elements, Ya. A. Khetagurov on a possibility judge the characteristics of magnetic recording of impulses, B. I. Kal'nin on the element system for a universal digital computor, V. S. Malov on multiple control of the parameters of technologic processes, P. I. Popov on analysis of several systems with which physical energy apparatus can be automatically started, Yu. I. Topcheyev on a method to examine the quality of a reactor control when the reactivity changes stepwise or linearily. G. A. Leont'yev and A. I. Yevstyukhin on examination of the iodine method of refining niobium and characteristics of the metal obtained, P. L. Gruzin and G. G. Ryabova on examination of the micro-distribution of carbon, tungsten, iron and other elements in zirconium and its alloys by use of auto-radiography, G. B. Fedorov on determination of the sublimation heat of zirconium and nickel by using radioactive indicators and G. B. Fedorov and A. N. Semenikhin on determination of the diffusion coefficients of chromium, nickel, iron and chromium nickel steels. The literature for all those lectures will be published by the MIFI in a symposium.

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TYAGUNOV, G.A.

PHASE I BOOK EXPLOITATION SOV/5522

Akademiya nauk SSSR. Komitet tekhnicheskoy terminologii

Elektrovakuumnyye pribory; rezhimy, parametry i kharakteristiki (Electronic Devices; Their Operating Conditions, Parameters, and Characteristics) Moscow, Izd-vo AN SSSR, 1960. 20 p. (Series: Its: Sborniki rekomenduyemykh terminov, vyp. 54) Errata printed on the inside of back cover. 4,000 copies printed.

Resp. Ed. for this issue: G.A. Tyagunov, Professor.

PURPOSE: This booklet is intended as an aid for technical personnel who design or operate electronic devices.

COVERAGE: The booklet contains terminology recommended by the Komitet tekhnicheskoy terminologii AN SSSR (Committee on Technical Terminology, AS USSR) for use in scientific, technical, and educational literature, industrial standards, engineering documentation, etc. The terminology covers the operating conditions, parameters, and characteristics of all categories of electronic devices as such, but does not apply to the various systems in which they are used, tested, or investigated. For each technical concept listed, the booklet indicates the recommended

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term and, in many cases, alternate or obsolete terms as well. A definition of each technical concept is included. The terms were developed by a special scientific commission of the Committee on the basis of observations from 62 educational, scientific, research, and industrial organizations which, in 1958, were provided with draft copies of the tentative terminology. The special commission consisted of the following persons: A.D. Azat'yan, A.G. Aleksandrov, I. V. Antik, N.N. Vasil'yev, A.A. Zhigarev, S.I. Korshunov, I.V. Lebedev, R.A. Nilender, and G.A. Tyagunov, Chairman. There are no references.

TABLE OF CONTENTS:

MOROZOVA, I.G.; TYAGUNOV, G.A., prof., red.; POPOVA, S.M., tekhn.red.

[Laboratory for the study of vacuum tubes and transistor devices] Uchebnaia laboratoriia elektrovakuumnykh i poluprovodnikovykh priborov; opisaniia rabot. Pod red. G.A.Tiagunova. Moskva, Izd-vo glav.upr.po ispol'zovaniiu atomnoi energii pri Sovete Ministrov SSSR, 1960. 58 p. (MIRA 13:8)

1. Rukovoditel' laboratorii elektrovakuumnykh i poluprovodnikovykh priborov Moskovskogo inzhenerno-fizicheskogo instituta (for Morozova).
(Electron tubes) (Transistors)

TYAGUNOV, G.A.
p. 3, #

PHASE I BOOK EXPLOITATION SOV/5134

Moscow. Inzhenerno-fizicheskiy institut

Uskoriteli; sbornik statey (Accelerators; Collection of Articles) Moscow, Atomizdat, 1960. 163 p. Errata slip inserted. 3,600 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR.

Ed. (Title page): G. A. Tyagunov, Doctor of Technical Sciences, Professor; Tech. Ed.: S. M. Popova.

PURPOSE: This collection of articles is intended for persons designing and constructing accelerators, and for technical personnel specializing in the field of superhigh frequencies.

COVERAGE: The book contains articles by staff members of the Department of Electrophysical Installations of the MIFI (Moscow Engineering Physics Institute) reflecting theoretical and experimental investigations of linear electron accelerators, betatrons and

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Accelerators (Cont.)

synchrotrons; one article deals with ion sources for cyclotrons. The theoretical papers on linear electron accelerators are a continuation of a similar research paper published in the collection of articles "Lineynyye uskoriteli" (MIFI edition, 1959) on the dynamics of particles in these machines. The theoretical papers on particle trapping for acceleration conditions in betatrons and synchrotrons contain a mathematical solution of this problem which takes into account the collective interaction of particles in the beam and the inductive properties of that beam at the moments of onset and break. A number of experimental investigations deals with measurements at shf and with electron accelerator and betatron components, while a special study is concerned with the linear cyclic accelerator ("elutron") proposed a few years ago by one of the coauthors of the article in question. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

Accelerators (Cont.) SOV/5134

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3

TYAGUNOV, G.A., doktor tekhn. nauk, prof., otv. red.

[Transistor devices] Poluprovodnikovye pribory. Moskva, Izd-vo Akad. nauk SSSR. Pt.1.[Basic concepts; terminology] Osnovnye poniatiia; terminologiia. 1962. 22 p. (Its: Sborniki rekomenduemykh terminov, no.62) (MIRA 16:4)

1. Akademiya nauk SSSR. Komitet nauchno-tekhnicheskoy terminologii.

(Transistors—Terminology)

TYAGUNOV, Georgiy Aleksandrovich. Prinimali uchastiye: ZHIGAREV, A.A., kand. tekhn. nauk; VAL'DNER, O.A., kand. tekhn. nauk; SHAL'NOV, A.V., kand. tekhn. nauk; CHISTYAKOV, P.N., kand. tekhn. nauk; YUDINSKAYA, I.V., starshiy prepodavatel'; FRIDKIN, A.M., tekhn. red.

[Electron-tube and transistor devices (physics, fundamental theory, and principal designs)] Elektrovakuumnye i poluprovodnikovye pribory (fizika, elementarnaia teoriia, osnovnye konstruktsii). Moskba, Gos. energ. izd-vo, 1962. 398 p. (MIRA 15:4)

(Electron tubes) (Transistors)

TYAGUNOV, G.A., prof., doktor tekhn. nauk, red.; KUKOLEVA, T.V., red.; VLASOVA, N.A., tekhn. red.

[Accelerators] Uskoriteli; sbornik statei. Pod red. G.A.Tiagunova. Moskva, Gosatomizdat. No.3. 1962. 215 p. (MIRA 15:4)

1. Moscow. Inzhenerno-fizicheskiy institut.
(Particle accelerators)

S/759/62/000/003/002/021

AUTHOR: Tyagunov, G. A.

TITLE: Comparative qualities of cyclic and linear electron accelerators

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli. no.3. 1962. 18-20

TEXT: This is a sequel of an estimate made in 1958 of low-energy accelerators, wherein it was shown that linear electron accelerators with traveling wave have the better technical-economic features. The present study covers electron accelerators for much higher energies, 1 BeV upward. The accelerators compared are those and California Institute of Technology, Cornell, Frascatti, Tokyo, Cambridge, West Germany, Stanford (Mod. III), London, and Stanford (20 and 45 BeV). It is concluded that cyclic accelerators are cheaper up to about 6 BeV, if no high-intensity primary beams are required, and beyond that the linear accelerator is superior. There are two tables and three references to English-language papers.

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S/759/62/000/003/003/021

AUTHORS: Lomnev S. P., Tyagunov G. A.

TITLE: Linear electron accelerator with constant phase velocity and with constant electric field intensity.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut, Uskoriteli. no. 3. 1962. 21-38

TEXT: The equations of motion of particles moving in a linear accelerator with constant phase velocity and electric field intensity under various initial conditions were numerically solved by means of the BESM electronic computer in order to investigate the characteristics of a beam obtainable from such an accelerator. The parameters chosen were the initial relative velocity of the injected particles and the amplitude of the electric field intensity of the accelerating wave. The velocity ranged from 0.2 to 0.8, and the field intensity from 50 to 140 kV/cm. The frequency corresponded to a wavelength of 11 cm. The results are plotted in eight figures, which show that the capture of the particle improves with increasing injection energy and electric field intensity. For each value of the field intensity there is a minimum injection energy below which cap-

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ture is impossible. The connection between the field intensity and the particle velocity at the start of capture is almost linear. The phases of the particles entering the beam and those leaving are parabolically related in the case of good capture. The capture efficiency is estimated. Energy spectra of the entering particles are plotted and show that the maximum output energy nearly coincides with the maximum particle density. The variation of the energy spectrum under different conditions is discussed. In an accelerator with constant phase velocity the amplitude of the axial field intensity is independent of the radius, thus eliminating the additional phase-energy spread of the particles that move at different distances from the axis. It is shown that magnetic focusing is essential in such an accelerator and that the use of a longitudinal magnetic field covering only a short part of the path [illegible] yields a dense beam. Although the computations were carried out with exact equations, approximate relationships are presented to clarify and estimate the qualitative variations of the various quantities.

S/759/62/000/003/008/021

AUTHORS: Gavrilov, N. M., Lomnev, S. P., Milovanov, O. S., Pyatnov, Ye. G. Tyagunov, G. A., Shal'nov, A. V.

TITLE: Output parameters and operating characteristics of linear electron accelerators

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli. no.3. 1962. 78-82

TEXT Tentative figures and plots of the output parameters and operating characteristics are presented for several linear accelerators developed at the Moscow Engineering-Physics Institute. The computations were made with the BESM electronic computers. The output parameters evaluated were the energy of the accelerated electrons, the width of the energy spectrum, and the phase width of the electron clusters. The input parameters were the injection energy, the injection current, and the power and frequency of the high-frequency supply. The energy was expressed in terms of its effective action (or thermal action if calorimetry is employed). The operating characteristics were determined in terms of dependence on the injection, the current, the power, and the frequency. Each dependence could in turn pertain to the energy, phase, and spectrum. Data are

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presented for the 2, 3, 5.5, and 26 MeV accelerators, and it is pointed out that changes in the waveguide structure will modify all the figures presented. There are 10 figures.

TYAGUNOV, G. A.

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S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fiveyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionization losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadze, h-f conductivity of subcritical plasma;

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Nauchnaya konferentsiya... S/089/62/013/006/019/027
B102/B186

design of 30-Mev electron linear accelerator; Ye. G. Pyatnov, A. A. Glaskov, V. G. Lopato, A. I. Pinogenov, G. N. Skopskiy, V. D. Selesnev, experimental characteristics of low-energy electron linear accelerators; G. A. Zeytlenk, V. M. Levin, S. I. Piskunov, V. L. Smirnov, V. K. Khokhlov, radiocircuit parameters of ЛУЭ (LUE)-type accelerators; G. A. Tyagunov, O. A. Val'dner, B. M. Gokhberg, S. I. Koreshunov, V. I. Kotov, Ye. M. Moros, accelerator classification and terminology; O. S. Milovanov, V. B. Varaksin, P. R. Zenkevich, theoretical analysis of magnetron operation; A. G. Tragov, P. R. Zenkevich, calculation of attenuation in a diaphragmated waveguide; Yu. P. Lazarenko, A. V. Ryabtsev, optimum attenuation length for linear accelerator; A. A. Zhigarev, R. Ye. Yeliseyev, review on trajectographs; I. G. Morozova, G. A. Tyagunov, review on more than 500 ion sources; M. A. Abroyan, V. L. Komarov, duoplasmatron-type source; V. S. Kuznetsov, A. I. Solnyshkov, calculation and production of intense ion beams; V. M. Rybin (Ye. V. Armenskiy), inductive current transmitters of high sensitivity; V. I. Koroza, G. A. Tyagunov, kinetic description of linear acceleration of relativistic electrons; A. D. Vlasov, phase oscillations in linear accelerators; E. L. Burshteyn, G. V. Voskresenskiy, beam field effects in the waveguide of an electron linear accelerator; R. S. Bobovikov,

Card 3/4

ACCESSION NR: AT4019719 S/2759/63/000/005/0035/0039

AUTHOR: Koroza, V. I.; Tyagunov, G. A. (Deceased)

TITLE: Kinetic equation for an electron beam in a linear accelerator, neglecting interaction

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli (Accelerators), no. 5, 1963, 35-39

TOPIC TAGS: particle accelerator, linear accelerator, linear electron accelerator, energy spectrum, phase spectrum, relativistic kinetic equation

ABSTRACT: One of the important problems in the study of linear electron accelerator is the determination of energy and phase spectra of the accelerated particles, i.e., their distribution functions. It is of interest to compute the distribution functions of theparticles in the beam by means of relativistic kinetic equations under given initial conditions on the distribution functions at the input of the accelerator. Neglecting particle interaction, such computations are carried out in the paper. Orig. art. has: 19 formulas.

ASSOCIATION: Inzhenerno-fizicheskiy institut, Moscow (Engineering-Physics Institute)

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ACCESSION NR: AT4019720 S/2759/63/000/005/0040/0044

AUTHOR: Koroza, V. I.; Tyagunov, G. A. (Deceased)

TITLE: The question of critical electron flow in the buncher of a linear accelerator

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli (Accelerators), no. 5, 1963, 40-44

TOPIC TAGS: linear accelerator, electron flow, relativistic particle, buncher, electron theory, electron, particle, kinetic equation, electron accelerator

ABSTRACT: Computations of various systems with bunches of relativistic particles have been carried out by means of a single-electron theory. In many cases, however, such computations are inadequate since they neglect the behavior of the collection of particles in the bunch as a whole. In the paper just preceding this one (in the same issue) the authors have carried out calculations based on the application of relativistic kinetic equations. In order to solve the various problems encountered in the study of the behavior

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ACCESSION NR: AT4019720

of collections of particles, this method has an essential advantage over the methods of integrating the equations of motion of separate electrons. For a linear electron accelerator the authors write down the Maxwell equations and for the bunch in the axial region, the kinetic equation. From these they obtain a formula for the critical current, i.e., the current which is the theoretical maximum possible current under the given operating conditions. Orig. art. has: 1 figure and 10 formulas.

ASSOCIATION: Inzhenerno-fizicheskiy institut, Moscow (Engineering-Physics Institute)

SUBMITTED: 00 DATE ACQ: 19Mar64 ENCL: 00

SUB CODE: NP NO REF SOV: 002 OTHER: 001

Card 2/2

TYAGUNOV, I.A.

Tangential stresses in beams subjected to bending. Nauch. dokl.vys.shkoly; stroi. no.2:111-114 '59.
(MIRA 13:4)

1. Rekomendovana kafedroy soprotivleniya materialov Odesskogo inzhenerno-stroitel'nogo instituta.
(Strains and stresses) (Girders)

TYAGUNOV, I.A., kand.tekhn.nauk

Bending of cantilevers with isosceles triangle cross sections subjected to concentrated loads in the plane of symmetry. Nauch. dokl.vys.shkoly; stroi. no.2:109-110 '58. (MIRA 12:1)
(Strains and stresses)

124-57-1-1072

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p. 149 (USSR)

AUTHOR: Tyagunov, I. A.

TITLE: Verification of the General Stability of Beams According to the Theory of Prof. V. Z. Vlasov (Proverka balok na obshchuyu ustoychivost' po teorii professora V. Z. Vlasova)

PERIODICAL: Sb. tr. Odessk. gidrotekhn. in-ta, 1954, Nr 6, pp 144-154

ABSTRACT: Examination of the separate and joint action of a concentrated force at the center and a uniformly distributed load along the length of a thinwalled beam with a symmetrical open profile supported at two points. The solution is performed according to Bubnov's method. The angle of twist is approximated by a function in the form of the series

$$\theta = \sum_{1}^{i} a_i \sin \frac{i \pi z}{l} .$$

As a result, equations are obtained for the critical loading upon successive retention of one, two, and three terms of the series. Equations obtained by retention of three terms of the series were found to be exceedingly cumbersome. The computational formulas recommended for the critical loadings and critical stresses are

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Verification of the General Stability of Beams According to the Theory (cont.)

obtained by means of a solution with retention of two terms of the θ series and a few simplifications, wherein certain terms, which yield only a minor numerical contribution, are discarded. Some general conclusions given by the author from the solution of a particular example appear unconvincing, particularly his statement that the calculation method for the stability of beams developed by G. M. Chuvikin [Obshchaya ustoychivost' monorel'sovykh balok (General Stability of Monorail Beams), Sb. VNIIPTMASH, Mashgiz, 1948], yields incorrect results. Equally unfounded is the statement on the allegedly insufficient verification of the stability of beams according to N and TU-1-46. It is obvious that a comparative evaluation of these methods can be given only upon a more generalized analysis. Formula (12), which is recommended for the evaluation of the errors in the solution, is obtained under exceedingly crude assumptions and, apparently, does not yield a satisfactory answer relative to the difference between approximate and exact solutions. It is also necessary to note that in equation (3) a typesetting error has crept in; the numerical coefficient before the second term should be one-tenth of the value shown.

1. Beams--Stability--Theory

V. N. Arbuzov

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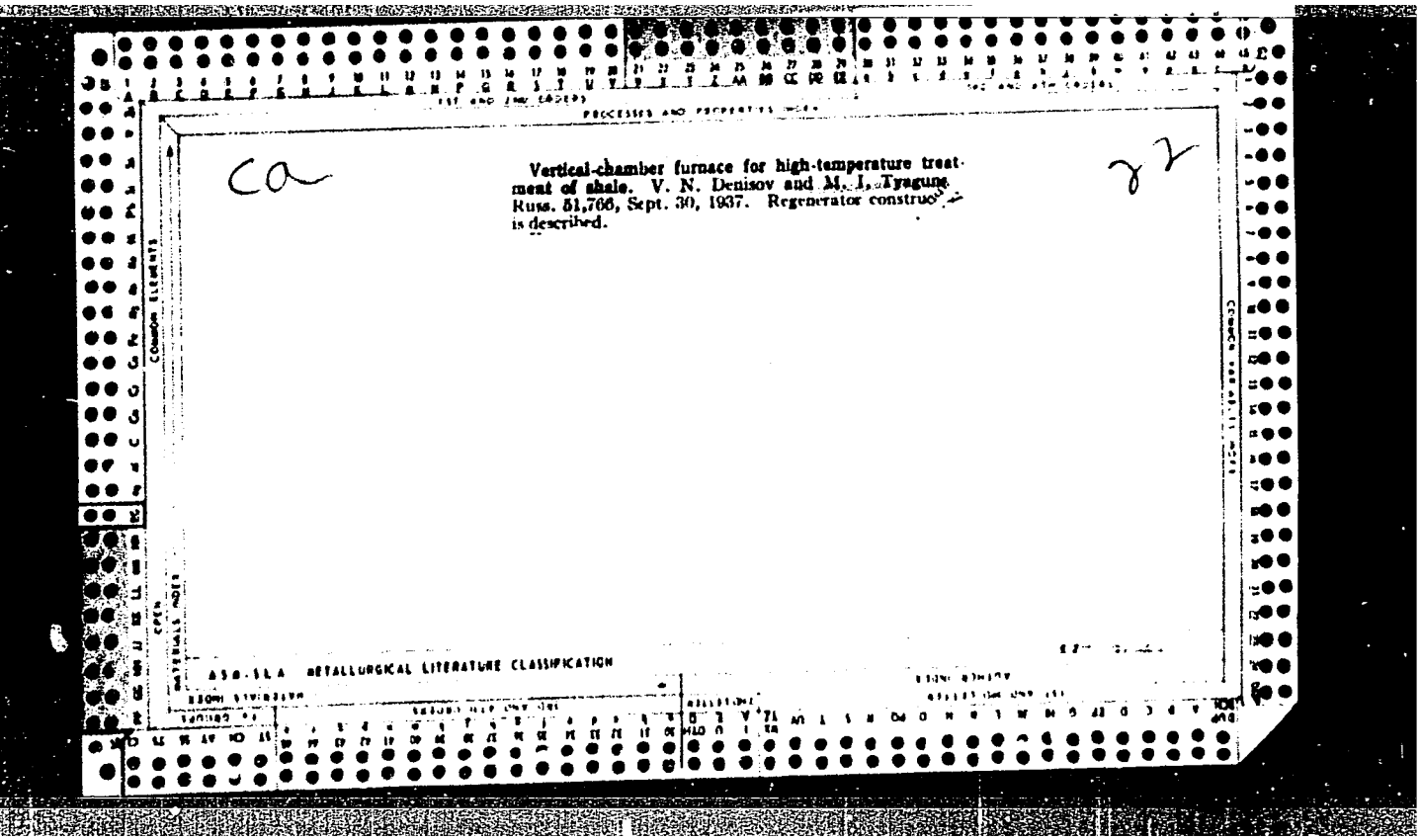

Ca

Vertical-chamber furnace for high-temperature treatment of shale. V. N. Denisov and M. I. Tyagunov. Russ. 51,766, Sept. 30, 1937. Regenerator construction is described.

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ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

TYAGUNOV, N.P.

Feb 49

USSR/Electricity
Inductors
Insulation, Electric

"Defect in Type PNB-35 Inductors," V. F. Voskresenskiy, N. P. Tyagunov, Engineers, 1/3 p

"Elek Stants" No 2

Refers to insulation testings, conducted by high-voltage laboratories, during which subject inductors were rejected. Discusses various defects and emphasizes necessity of improving construction.

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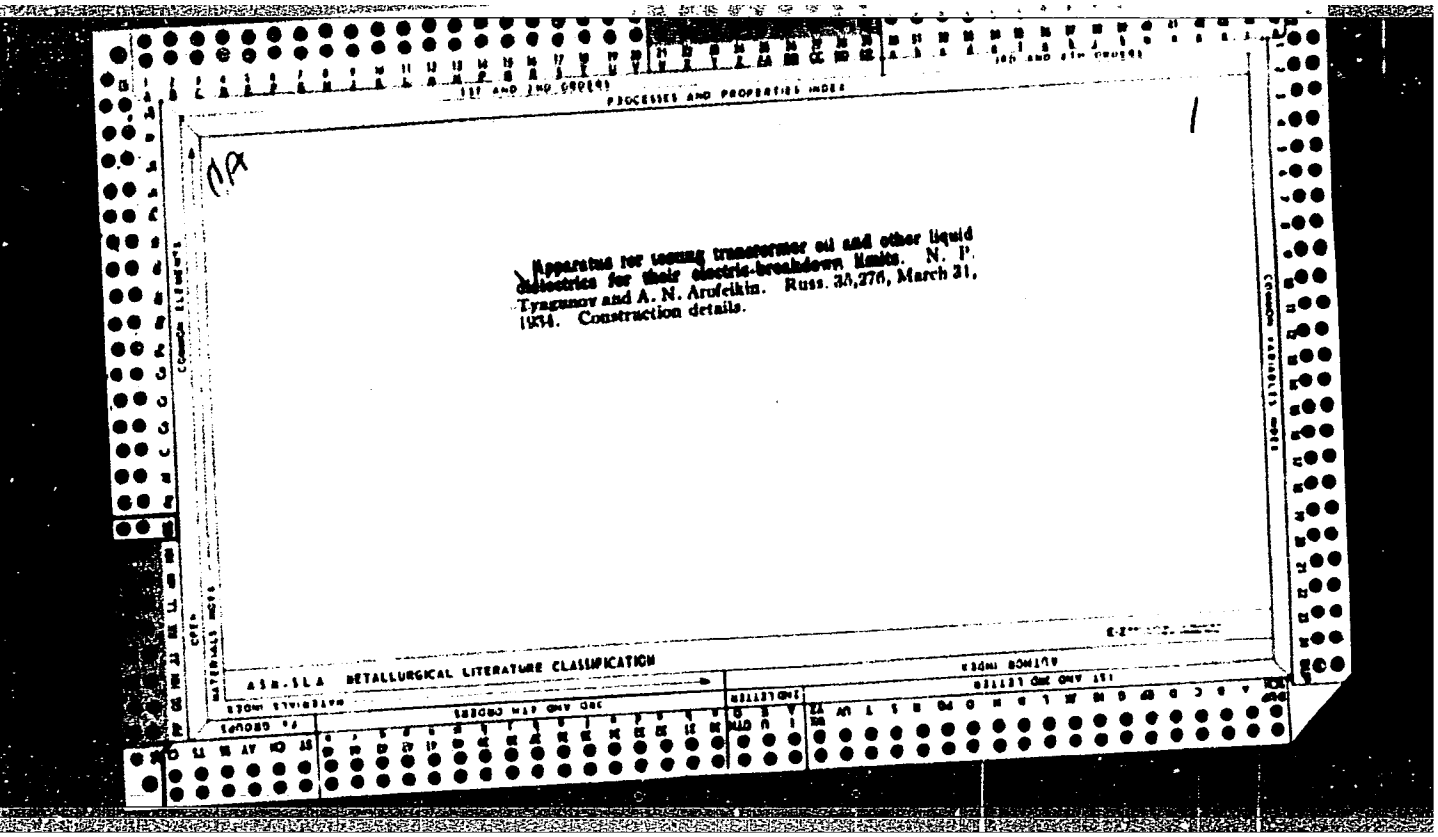
FDB



11A

Apparatus for testing transformer oil and other liquid dielectrics for their electric-breakdown limits. N. P. Tyagunov and A. N. Arufelkin. Russ. 33,276, March 31, 1934. Construction details.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

TYAGUNOV, S.A.

Using operating cranes for moving soil in earthwork operations.
Prom. stroi. 39 no.4:52-54 '61. (MIRA 14:6)
(Earthmoving machinery)
(Cranes, derricks, etc)

TYAGUNOV, S.A., inzhener.

Organization of work in erecting one-story industrial buildings equipped with cranes. Stroi.prom.34 no.12:10-12 D '56. (MLRA 10:2)

1. Trest Matkozhpromstroy Ministerstva stroitel'stva predpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti SSSR.
(Cranes, derricks, etc.) (Reinforced concrete construction)
(Factories)

TYAGUNOV, V.A.; VOSKRESENSKIY, V.A.

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1. Ural'skiy politekhnicheskiy institut.

TYAGUNOV, V. A.

TYAGUNOV, V. A.: "The optimum system of working reversing rolling mill stands." Min Higher Education USSR. Ural Polytechnic Inst imeni S. M. Kirov. Leningrad Polytechnic Inst imeni M. I. Kalinin. Sverdlovsk, 1956. (Dissertation for the Degree of Doctor in Technical Sciences.)

Source: Knizhnaya letopis' No 40 1956 Moscow

ZLATKIN, Moisey Grigor'yevich; DOROKHOV, Nikolay Nikolayevich; LEBEDEV, Nikolay Ivanovich; MAKAROV, Nikolay Yevgen'yevich; NEYSHTAT, Zyama Fal'kovich; SYCHEV, Arkadiy Mikhaylovich; SKLYUYEV, P.V., kand. tekhn. nauk, retsenzent; TASHCHEV, A.K., kand. tekhn. nauk, retsenzent; TRUBIN, V.N., kand. tekhn. nauk, retsenzent; VSHIVKOV, P.P., inzh., retsenzent; KON'KOV, A.S., inzh., retsenzent; LEBEDEV, N.S., inzh., retsenzent; POTEKUSHIN, N.V., inzh., retsenzent; TYAGUNOV, V.A., doktor tekhn. nauk, red.; SOKOLOV, K.N., kand. tekhn. nauk, red.; SKORNYAKOV, V.B., red.; YAROSHENKO, Yu.G., red.; ZAKHAROV, B.P., inzh., red.; AMIROV, I.M., inzh., red.; MYSHKOVSKIY, V.A., inzh., red.; SHELEKHOV, V.A., inzh., red.; BOGOMOLOV, O.P., inzh., red.; KATS, I.S., inzh., red.; LEVANOV, A.N., inzh., red.; DUGINA, N.A., tekhn. red.

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(Forging—Handbooks, manuals, etc.)

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KON'KOV, Arkadiy Sergeyevich; RAYTSES, Veniamin Borisovich; GARYAYEV, P.I., inzh., retsenzent; KAZAKOV, S.S., inzh., retsenzent; TYAGUNOV, V.A., kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

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KAMENSHCHIKOV, G.G.; TYAGUNOV, V.A., kandidat tekhnicheskikh nauk, redaktor; DUGINA, N.A., tekhnicheskiy redaktor

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Operating conditions of reversing rolling mills. Trudy Ural. politekh.inst. no.45:5-40 '53. (MLRA 9:11)
(Rolling mills)

TYAGUNOV, V.A., kandidat tekhnicheskikh nauk.

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(Rolling (Metalwork))

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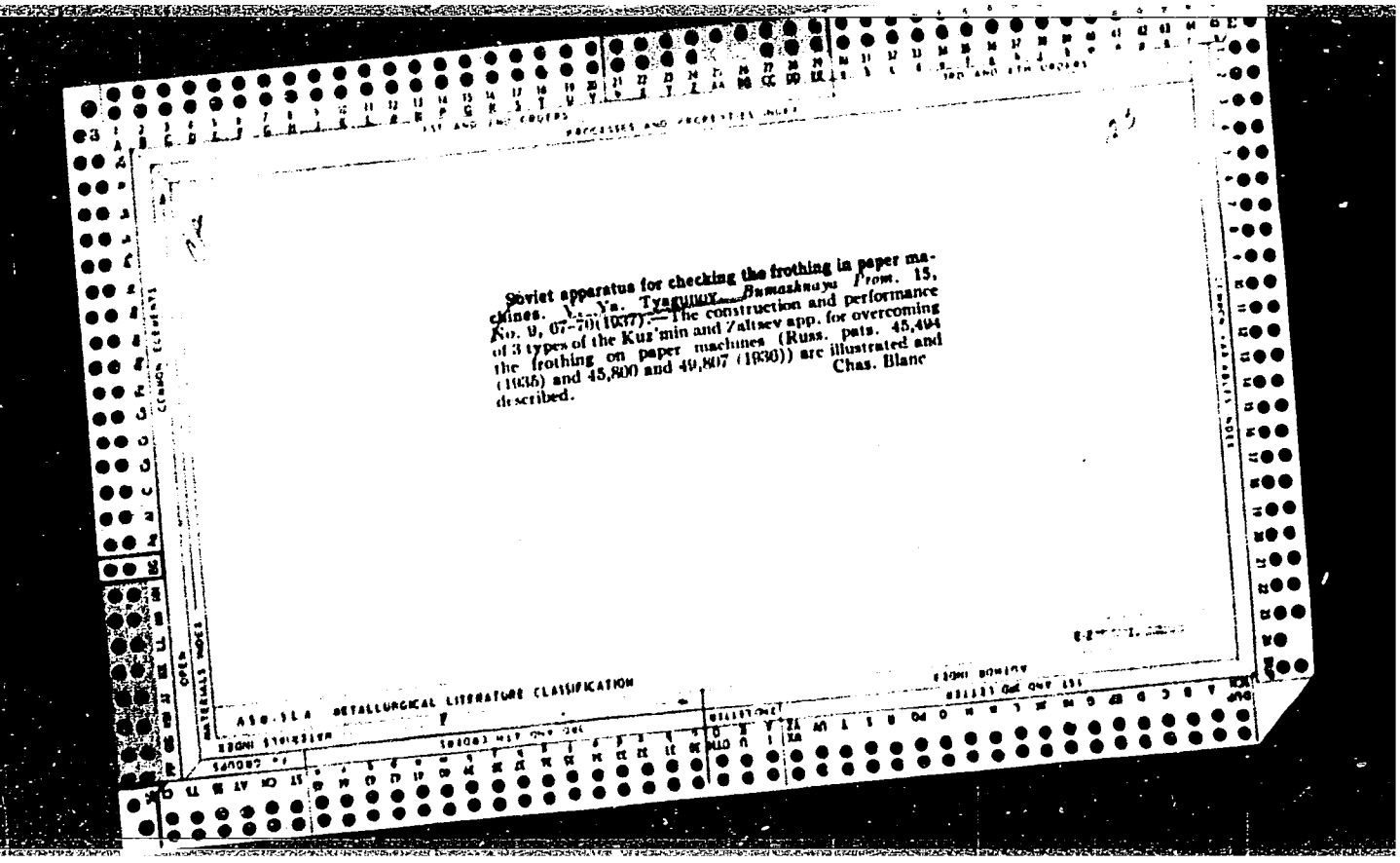

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Chas. Blanc